



IP Telephone Installer Guide

LIP-6812 & 6830 **SIP (Session Initiation Protocol)** **for Broadworks Rls. 14**

Please read this manual carefully before installation.
Retain it for future reference.

Regulatory & Safety Notice

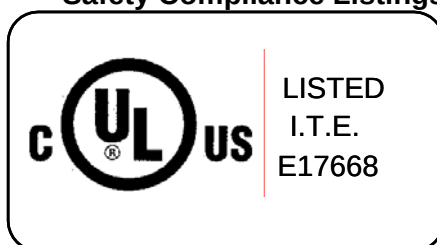
LIP-6812D & LIP-6830D

This equipment complies with the following regulatory standards, FCC Part 15, IC (Industry Canada) CS03, TBR21, TBR03, and TBR04. Also, this equipment complies with the safety requirements of UL60950, CSA60950, EN60950, EN55022 and EN55024

FCC Compliance Statement

This device complies with part 15 of the FCC Rules for a Class B device. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation..

Safety Compliance Listings & Markings



Revision History

ISSUE	DATE	Contents of Changes	REMARK
1.0	2006.12	Initial Release	
1.1	2006.12.29	Update to rls. 1.2.15s	
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Read Me First!

Stopping DHCP Binding

When the LIP Phone is powered-On, it searches for a DHCP server to get network and configuration information. If your network has a DHCP server, the LIP-6812/LIP-6830 can get information easily and automate provisioning. However, if a DHCP server does not exist, the LIP Phone will continue searching for a DHCP server for an extended period of time. To stop the search, press the 'Settings' button 3 times; the DHCP binding attempt will stop after few seconds.

Applying VLAN changes at Boot-up

During a power or disconnect boot-up, the LIP-6812 & LIP-6830 may implement an automatic provisioning process, retrieving a configuration file from a server. If VLAN settings are changed by the retrieved configuration file, the LIP-Phone must again reboot for normal operation. If VLAN settings are changed, the LCD will display the reboot message as shown below. Press the **[Yes]** Softkey to reboot the LIP-6812/LIP-6830.

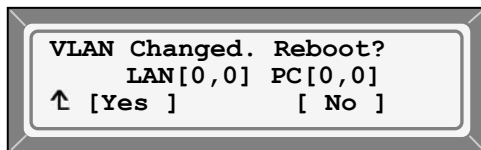


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1. Introducing the LIP-6812 & LIP-6830

1.1 LIP-6812 and LIP-6830 Overview

LIP-6812 and LIP-6830 are Internet Protocol (IP) phones designed to support hosted telephony services over a managed IP network. Based on the open standard Session Initiation Protocol (SIP), LIP-6812 & LIP-6830 will interoperate and exchange signaling messages with SIP Servers, Proxies and gateways while voice packets are exchanged on a point-to-point basis between the phone and the connected party through the Service Provider's network.

Features and functions available to the LIP-6812 & LIP-6830 through the SIP Call Server are similar to those of a conventional business telephone. For ease of use, the LIP-6812 and LIP-6830 are equipped with Fixed feature buttons, Flexible (programmable) feature buttons, an LCD display, Softkeys, and a Dial pad. These elements are described in more detail in section 1.3.

1.2 LIP Phone Features

Features available to the LIP-6812/LIP-6830 are dependent upon the SIP Call Server and configuration of the IP Phone as well as subscribed services. Details on the features available from the Call Server and the subscribed services are available in the User Guide available from the Service Provider's representative.

Basic features provided by the LIP-6812 & LIP-6830 and the Call Server include:

- IP phone operation with SIP protocol
- Local configuration via keypad/LCD
- S/W upgrade, TFTP or HTTP/HTTPS
- Mute
- IP Addressing: static/dynamic IP (DHCP)
- RTP/RFC2833 support
- 802.3af PoE (Power over Ethernet)
- Call Logs
- Click-to-call
- Speed Dial Buttons
- One-button Call Transfer
- Speed Number dialing
- Phone Book
- Caller ID display
- Caller ID blocking
- Anonymous Call blocking
- Call Forwarding
- Call Transfer
- 3-Way Conference, Centralized or Local
- Do Not Disturb (DND)
- Call Refusal
- Call Waiting
- Message Waiting Indicator (MWI) lamp/tone
- Hotline/Warm-Line (Direct Call)

- Flexible feature mapping
- Last number redial
- Call Return
- Station-to-Station dialing
- Handset, Headset, Speakerphone, and Ring volume control
- LCD Contrast control
- Call Hold Ringback
- Hands-free dialing
- Label for the Programmed feature buttons
- Full Duplex Speakerphone
- Multiple Ring types
- Distinctive Ring tones
- G.723.1A/G.729AB/PCMU/PCMA voice codec
- Acoustic Echo canceller
- Auto Answer
- Ringer Off
- Web Based Management

NOTE: Certain feature functionality may be limited as a result of the VoIP environment.

1.3 LIP-6812/LIP-6830 General Description

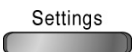
The LIP Phones interface with the user to deliver voice and audio signals over the handset and speaker. A Microphone, which can be switched On and Off (muted), is located in the right front for audio input to the LIP-6812 and LIP-6830 Speakerphone. The 3-line-24 character LCD is a visual output for status and interactive menus. The various buttons are the LIP-6812 and LIP-6830 input devices used to access resources, activate features, and interact with menus. Location of the devices and buttons of the LIP-6812 are provided in Figure 1.3-1 and Figure 1.3-2. Location of the devices and buttons of the LIP-6830 are provided in Figure 1.3-3 and Figure 1.3-4.



Figure 1.3-1 Front view of LIP-6812



Figure 1.3-2 LIP-6812 buttons

NUMBER	BUTTON	FUNCTION
1		Left direction button. This button has two functions; when  appears on the bottom-left corner of the LCD, the previous menu may be selected.
		Right direction button. When  appears on the bottom-right corner of the LCD, the next group of Softkeys may be selected.
2		Softkeys. Softkeys are interactive, changing function based on the LIP Phone status. When selected and verified, by pressing [OK] Softkey, the IP phone performs the selected function.
3		Settings button. 'Settings' accesses and exits the LCD menu for display and modification to the LIP Phone configuration.
4		Volume control button. Use to adjust Ring, Headset, Handset, and Speaker volume.
5		Speaker button. Toggle the LIP-6812 speakerphone On and Off.
6		Mute button. Toggle audio from the microphone to the connected party On and Off.
7		Headset button When using a headset, this button toggles the headset state. When the headset is active, this button LED is red.
8		Eleven flexible buttons with Red/Green LEDs. Assign as Line or feature using the LCD Menu or Web Manager. Default assignments for buttons 1 and 2 are primary and secondary Line appearance for the extension.

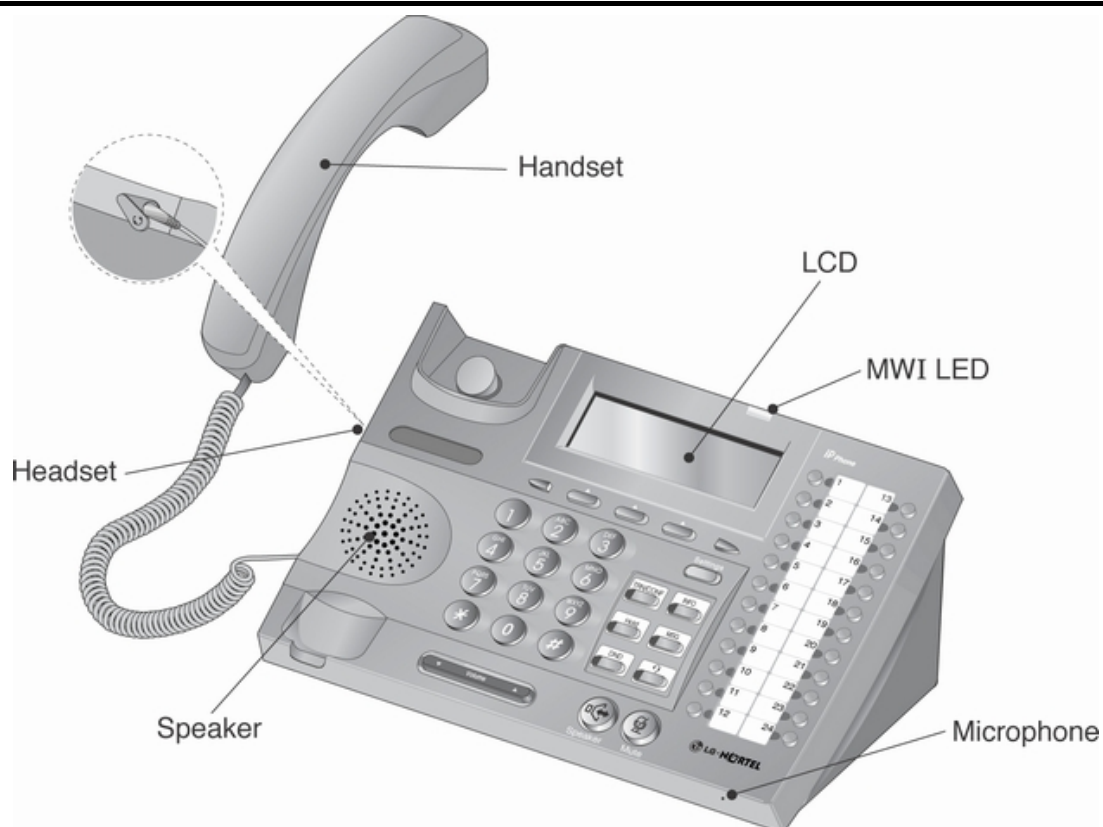


Figure 1.3-3 Front view of LIP-6830



Figure 1.3-4 LIP-6830 buttons

NUMBER	BUTTON	FUNCTION
1		Left direction button. This button has two functions; when  appears on the bottom-left corner of the LCD, the previous menu may be selected.
		Right direction button. When  appears on the bottom-right corner of the LCD, the next group of Softkeys may be selected.
2		Softkeys. Softkeys are interactive, changing function based on the LIP Phone status. When selected and verified, by pressing [OK] Softkey, the LIP phone performs the selected function.
3		Settings button. 'Settings' accesses and exits the LCD menu for display and modification to the LIP phone configuration.
4		Twenty-four flexible buttons with Red/Green LEDs. Assign as Line or feature using the LCD Menu or Web Manager. Default assignments for buttons 1 and 2 are primary and secondary Line appearance for the extension.
5		Headset button. When using a headset, this button toggles the headset state. When the headset is active, this button is red.
6		CONF button. Use to establish a conference.
		INFO button. Use to display configuration settings of the LIP-6830.
		Hold button. Use to place a call on Hold. Also, use to access a held call.
		MSG button. When the MWI LED indicates you have a message waiting, use to access Voice Mail server.
		DND (Do-Not-Disturb) button. Use to activate DND so that extension will not ring.
7		Mute button. Toggle audio from the microphone to the connected party On and Off.
8		Speaker button. Toggle the LIP-6830 speakerphone On and Off.
9		Volume control button. Use to adjust Ring, Headset, Handset, and Speaker volume.

2. Basic Installation

The LIP-6812 & LIP-6830 have been designed to be simple, yet flexible to install. The physical installation is a matter of connecting the ports of the LIP Phone to the LAN, the Desk-top PC and when Power over Ethernet (PoE) is not supported, to power (refer to section 2.1).

The LIP Phone can be configured automatically using CDP, DHCP and downloaded Configuration files (refer to Appendix F. Auto Provisioning Routine). The LIP Phone retrieves the Configuration files from a TFTP or HTTPS server (refer to Appendix D. Using the Configuration File); the Configuration files provide the needed information for 'Plug & Play' provisioning.

When power is applied and during a reboot, CDP, if enabled, determines any VLAN Id settings and then basic provisioning parameters are requested from the local DHCP Server:

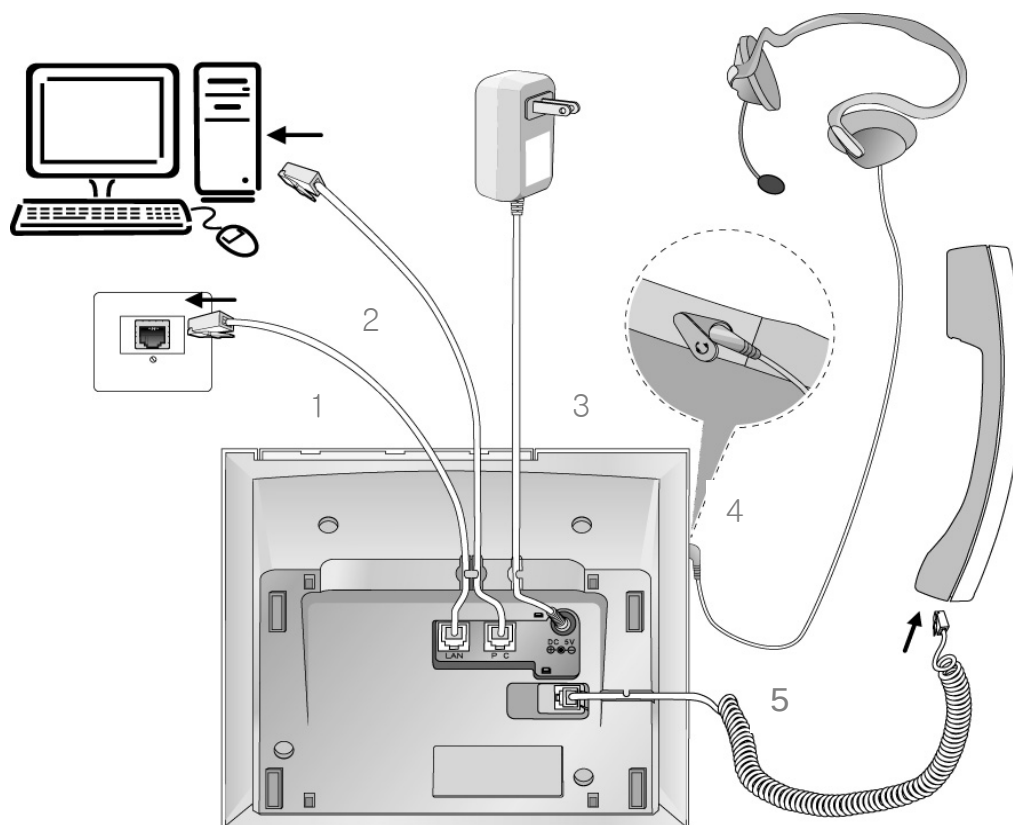
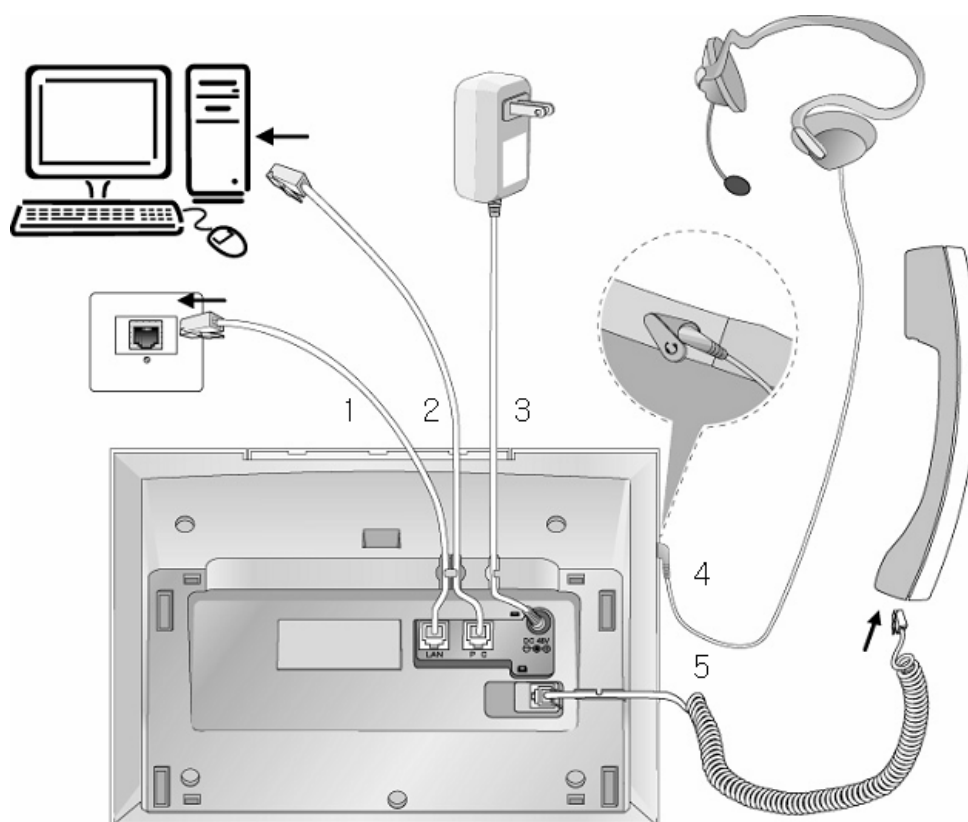
- DHCP Option #1 Subnet Mask
- DHCP Option #2 Time offset in seconds of the local time zone from GMT.
- DHCP Option #3 Default Gateway (router) IP Address
- DHCP Option #6 DNS Server IP Address
- DHCP Option #42 SNTP Server IP Address
- DHCP Option #50 IP address of the phone
- DHCP Option #66 TFTP Server Name
- DHCP Option #150 TFTP Server IP Address, has priority over Option 66 when set
- DHCP Option for HTTPS provisioning URL, default #160 has priority over Option #66 and 150

The LIP-6812 & LIP-6830 automated provisioning loads Configuration files, and if required, phone software from the DHCP configured server, TFTP or HTTPS. When complete, the LIP Phone automatically will register and authenticate for SIP call services using the configured parameters. Note the LIP phone can be configured to ignore DHCP Option 66/150 and/or the HTTPS provisioning URL Option, default 160.

When the 'Plug & Play' process described above is not available or desired, the LIP-6812/LIP-6830 can be manually configured using the phone Dial pad and/or the LIP-6800 Web Manager (Sections 3 and 4 respectively). If manual configuration is desired, Configuration download must be disabled or the manually configured parameters must be removed from the downloadable Configuration file.

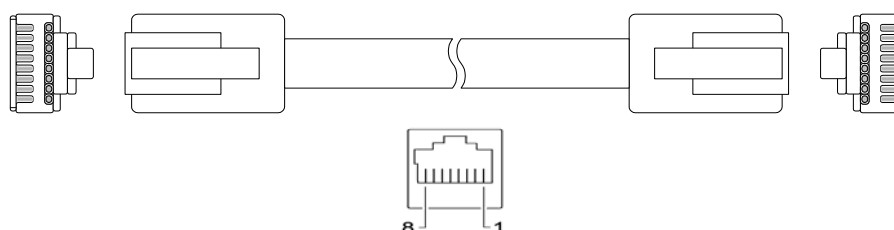
2.1 Physical Connections

The following figure shows the cable connections for LIP-6812 & LIP-6830 phones. The LAN and PC connections are made with Standard CAT 5 cables terminated with RJ-45 connectors (refer to Figure 2.1-1, Figure 2.1-2 and Figure 2.1-3). The LIP Phones are designed to support PoE (Power over Ethernet) ; if a PoE compliant Ethernet switch port is provided, the LIP Phone will derive power from the port. If the LAN switch port does not support PoE, power connection is by way of the optional AC/DC adapter, available separately. The handset is connected to the base with a standard handset coil cord that is supplied with the LIP Phone.

**Figure 2.1-1 Bottom view of LIP-6812****Figure 2.1-2 Bottom view of LIP-6830**

LIP-6812/LIP-6830 Connections		
ID	Name	Function
1	LAN	Connect IP Phone LAN port to LAN wall jack with UTP-5 cable w/RJ-45, Figures 2.1-1 & 2.1-2.
2	PC	Connect IP Phone PC port to user desktop PC with UTP-5 cable w/RJ-45, Figures 2.1-1 & 2.1-2.
3	Power (Option)	Connect IP Phone Power port to DC out of Power Adapter, (Output: +48V DC 100mA). Connect Power Adapter to AC wall jack, (Input: 120VAC 60Hz). If the LAN switch supports in-line power (IEEE 802.3af compliant), the AC/DC adapter is not required.
4	Headset	Connect Headset Coil cord to LIP Phone base.
5	Handset	Connect Handset Coil cord to LIP Phone base and handset.

Table 2-1 Description of LIP-6812/LIP-6830 connector ports



LAN Ethernet port pin assignment

Pin 1 = TX+
 Pin 2 = TX-
 Pin 3 = RX+
 Pin 4 = optional: 48V (or GND)
 Pin 5 = optional: 48V (or GND)
 Pin 6 = RX-
 Pin 7 = optional: GND (or 48V)
 Pin 8 = optional: GND (or 48V)

PC Ethernet port pin assignment

Pin 1 = RX+
 Pin 2 = RX-
 Pin 3 = TX+
 Pin 4 = No connection
 Pin 5 = No connection
 Pin 6 = TX-
 Pin 7 = No connection
 Pin 8 = No connection

Figure 2.1-3 RJ-45 Plug Terminations

3. LCD Menu Configuration

This chapter provides detailed information to configure the LIP-6812 and LIP-6830 IP Phone using the LCD for menu display, Softkeys, and Dial pad for inputs. To configure the IP phone manually, it should be connected to the LAN and, if required, power cables as described in Section 2.1. Before beginning configuration of the LIP Phone, as a minimum, you will need the following information:

- IP address scheme for the LIP Phone, Dynamic (DHCP) or Static.
- For Static IP addressing you will need the:
 - LIP Phone IP address
 - Default gateway address
 - Subnet Mask
 - SIP Call server IP address
 - Configuration (TFTP) server address
 - SNTP server IP address
 - DNS server IP address
 - Proxy server IP address

Configuration with the LCD Menu employs the Menu tree structure shown in Figure 3-1 and Figure 3-2. To initiate a Configuration session, press the  button to access the first branch in the menu as shown in Figure 3-1. The next branch or entry is select using the digit associated with the branch or highlighted with the cursor and selected with the [**OK**] Softkey, see Figure 3-2. When an individual parameter, such as Default Gateway, is reached data is entered from the dial pad and/or selected with the 3 Softkeys below the LCD.

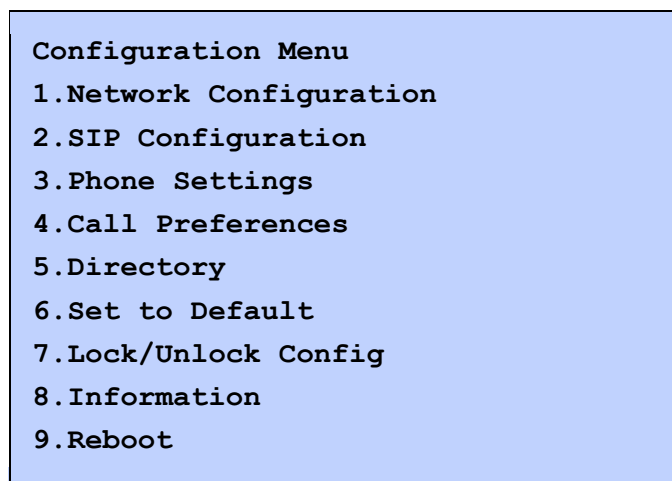


Figure 3-1 LIP-6812/LIP-6830 Configuration Menu

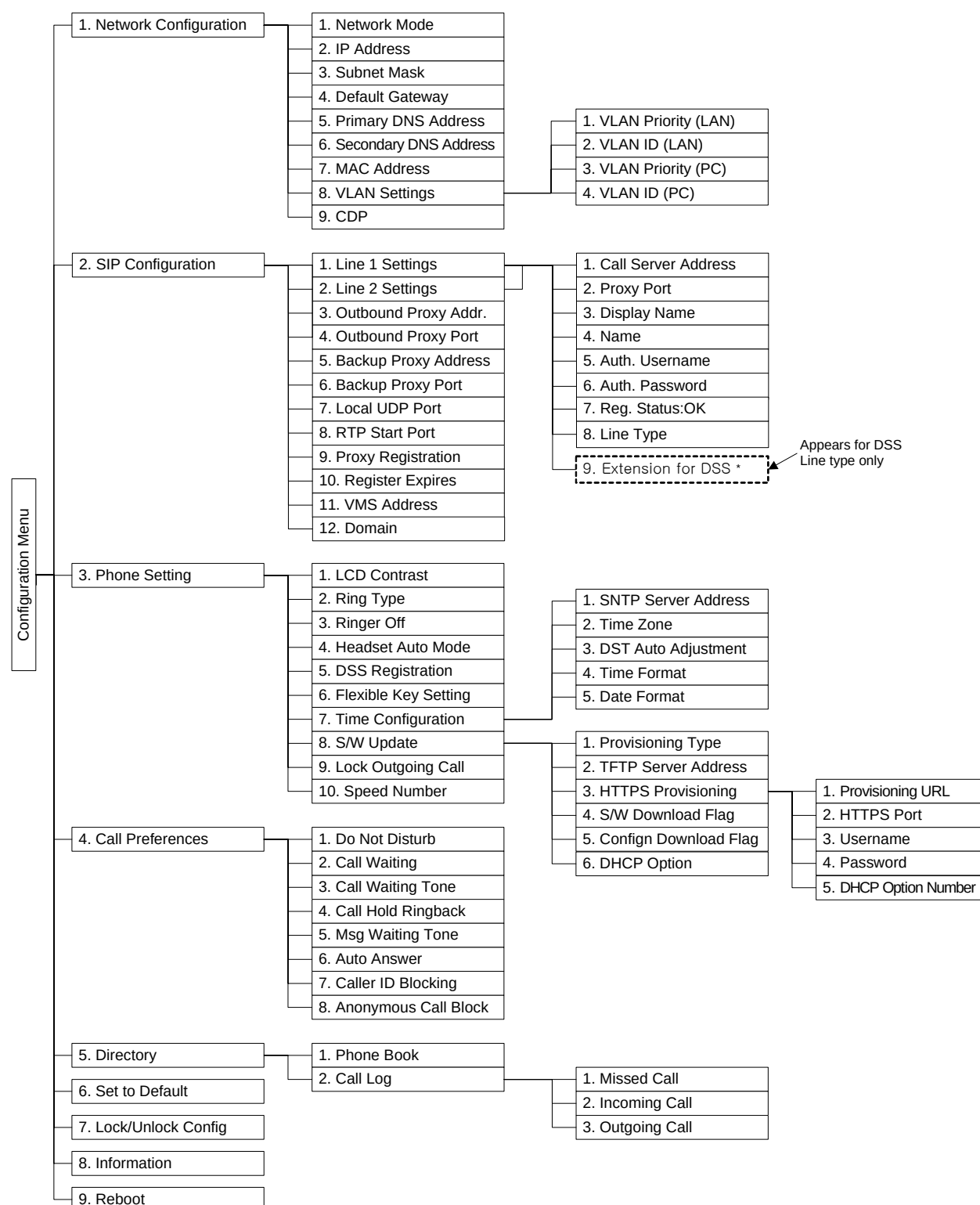


Figure 3-2 LCD Menu Tree

3.1 LCD Menu Navigation

The LCD Menu is accessed only from the idle state and may be password protected (Locked). If the LCD Menu is Locked, data may be viewed, however data entry is not possible (refer to Section 3.3 Lock/Unlock Configuration).

To access the Configuration menu:

- 1) Press the  button.

To select an item from a menu:

- 1) Dial the digit associated with the menu item, or use the **[Next]/[Prev]** Softkeys to move the cursor and display the item, then press the **[OK]** Softkey.

NOTE: When additional Softkey functions are available, **→** appears at the bottom-right corner of the LCD. Use the  button to view the next group of Softkey functions.

To return to the previous branch in the menu if **↑** is displayed:

- 1) Press the  button at the bottom left corner of the LCD.

To exit the configuration menu:

- 1) Press the  button or press the  button at the main branch of the LCD Menu.

3.2 Dial Pad Editing of Configuration Values

When you edit the value of a configuration using the Dial pad, the following guidelines apply.

The Dial pad is used to input numbers, letters, special characters, and period. If a configuration can accept both numbers and letters, the **[Mode]** Softkey will be available. The **[Mode]** Softkey switches the Dial pad entry mode: The mode sign appears in the upper-right corner as **[1]** (number), **[A]** (upper case), **[a]** (lower case) or **[S]** (special characters) mode.

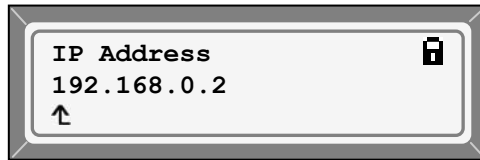
To enter letters with the Dial pad, use the digit with the desired letter. Press the same digit repeatedly until the letter that you want appears. After you enter a letter and pause, the cursor automatically moves to next letter position. The relation between the Dial pad digits and letters is shown in *Appendix E*.

- To enter a period (for example, to input an IP address), press the ***** key
- To delete a letter in front of the cursor, press the **[←]** Softkey
- To clear an entire string, press **[CLR]** Softkey

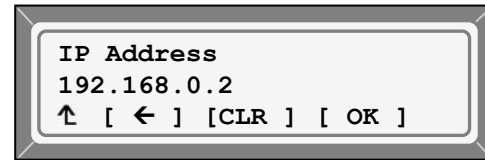
To discard any changes you have made, press the  button to move to the previous menu without saving the entry.

3.3 Lock/Unlock Configuration

The LIP Phone LCD Menu can be password protected for security. If a password is assigned and the LCD Menu Locked, the Menu must be unlocked using the password in order to change any parameter. Otherwise, the configuration data may be viewed only. When the LCD Menu is locked, a *locked* padlock icon appears in the upper-right corner of the LCD as shown below.



Locked Display



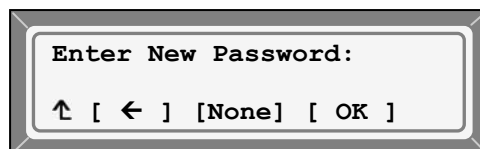
Unlocked Display

To assign a password:

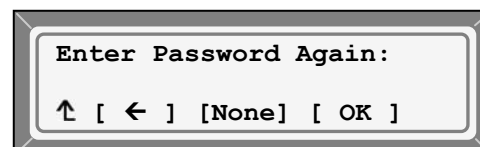
- 1) Press the  button.
- 2) Press  button, or move the cursor to **7.Lock/Unlock Config** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey. If a password has been previously established, the previous password must be entered, then press the **[Chng]** Softkey.



- 3) Enter your new password using the Dial pad and press the **[OK]** Softkey. A password must be composed of 4-digits.



- 4) To verify your password, input your new password again and press the **[OK]** Softkey.



- 5) Press the  button to exit the Configuration session and lock the LCD Menu.



To remove a password, press the **[None]** Softkey in Step 3.

A password must be composed of 4 digits.

When a new password is assigned, the LCD Menu is automatically unlocked.

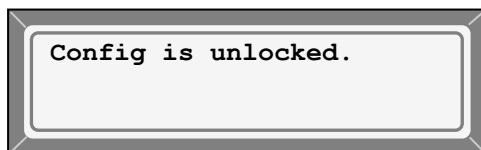
To unlock the LCD Menu:

6) Press the  button.

7) Press  button or move the cursor to **7.Lock/Unlock Config** using the **[Next]/[Prev]** Softkeys and press **[OK]** Softkey.



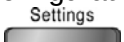
8) Dial the assigned password and press the **[OK]** Softkey, the LCD Menu, the *Unlock* message appears for approximately 2 seconds.



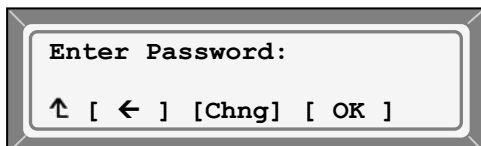
If you exit from the LCD Menu after unlocking, the menu will lock automatically.

If you enter an invalid password, an error message appears and returns to the "Enter Password" display.

To lock the Configuration menu:

1) Press the  button.

2) Press  button or move cursor to **7.Lock/Unlock Config** using the **[Next]/ [Prev]** Softkeys and press the **[OK]** Softkey.



3) The *Locked* message appears for approximately 2 seconds.



3.4 Network Configuration

Under **Network Configuration**, the IP Network settings, Dynamic Host Control Protocol (DHCP) mode, IP addresses, DNS (Domain Name Service), etc. can be viewed and changed. In addition, the LIP-6812 & LIP-6830 MAC address can be viewed. When Static IP addressing is employed on the LAN, the IP Network settings must be configured manually; the settings include:

- IP Address
- Default Gateway (router) IP Address
- Subnet Mask



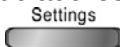
Changing Network parameters requires a reboot of the LIP Phone; when you exit the LCD Menu, you will receive a Reboot notice.

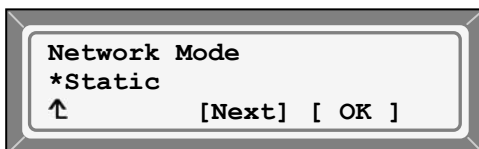
3.4.1 Network Mode

The IP Phone is capable of obtaining all of its IP configuration data from a DHCP server. When Static addressing is employed for the Network mode, the following network parameters must be defined:

- IP address of the phone
- Default Gateway (router) IP Address
- Subnet Mask
- DNS Address

To set the Static addressing mode:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **1.Network Configuration** using **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **1.Network Mode** using **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Choose the Network Mode using **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey to save your selection.



- 5) Press the  button to exit from the menu.



An asterisk ***** is displayed in front of the current selection.

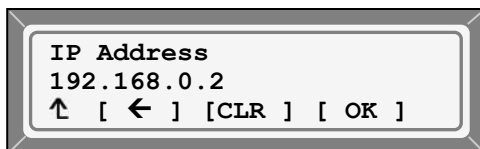
Changing the Network Mode requires a reboot of the LIP Phone; when you leave the menu, you will receive a Reboot notice.

3.4.2 IP Address

When the Static IP Address mode is configured, the IP address must be assigned manually. The LIP Phone requires a valid IP address for proper operation.

To set the IP Address:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **1.Network Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **2.IP Address** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Input IP address for the LIP-6812/LIP-6830 using the Dial pad, and press the **[OK]** Softkey to save your Configuration.



- 5) Press the  button to exit from the menu.

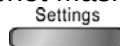


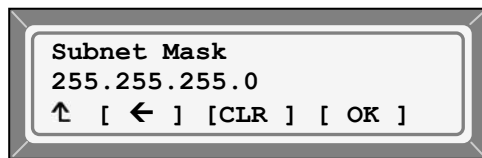
In DHCP mode, the LIP Phone will retrieve an IP Address from the DHCP server. Changing the IP Address can only be done in the Static mode and requires a reboot of the LIP Phone; when you leave the menu, you will receive a Reboot notice.

3.4.3 Subnet Mask

When the Static IP Address mode is configured, the Subnet Mask must be configured manually.

To set the Subnet Mask:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **1.Network Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **3.Subnet Mask** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Input the Subnet Mask for the LIP-6812/LIP-6830 using the Dial pad, and press the **[OK]** Softkey to save your Configuration.
- 5) Press the  button to exit from the menu.



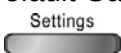
The Subnet Mask only can be changed from Static mode and not if DHCP mode is active.

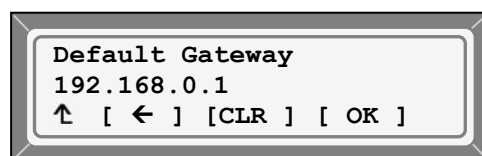
Changing the Subnet Mask requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

3.4.4 Default Gateway

For the static IP Address scheme, you must configure the Default Gateway address; this is a mandatory setting for proper operation.

To assign a Default Gateway:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **1.Network Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **4.Default Gateway** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Input the Default Gateway IP address for the LIP-6812/LIP-6830 using the Dial pad, and press the **[OK]** Softkey to save your Configuration.



- 5) Press the  button to exit from the menu.



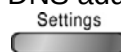
The Default Gateway only can be changed from Static mode and not if DHCP mode is active.

Changing the Default Gateway requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

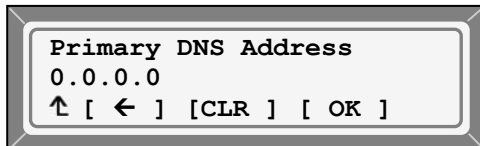
3.4.5 Primary DNS Address

If an FQDN is assigned as any of the servers in the LIP Phone configuration, the Primary Directory Name Server (DNS) is contacted to resolve the FQDN server address. This is an optional but recommended setting.

To assign the DNS address:

- 1) Press the  button. If the LCD Menu is locked, use the unlock (refer to Section 3.3 Lock/Unlock Configuration).

- 2) Press  button, or move cursor to **1.Network Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **5.Primary DNS Address** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Input the Primary DNS IP Address for the LIP-6812/LIP-6830 using the Dial pad, and press the **[OK]** Softkey to save your Configuration.



Primary DNS Address
0.0.0.0
↑ [←] [CLR] [OK]

- 5) Press the  button to exit from the menu.



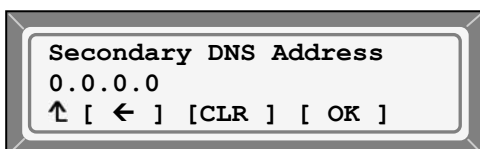
Changing the Primary DNS Address requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

3.4.6 Secondary DNS Address

If an FQDN is assigned as any of the servers in the LIP Phone configuration, the Primary DNS is contacted to resolve the FQDN server address. Should the Primary DNS not respond, a secondary DNS is contacted for FQDN resolution. This is an optional but recommended setting.

To assign the DNS address:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **1.Network Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **6.Secondary DNS Address** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Input the Secondary DNS IP Address for the LIP-6812/LIP-6830 using the Dial pad, and press the **[OK]** Softkey to save your Configuration.



Secondary DNS Address
0.0.0.0
↑ [←] [CLR] [OK]

- 5) Press the  button to exit from the menu.



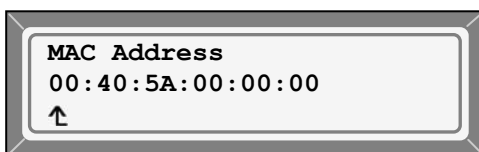
Changing the Secondary DNS Address requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

3.4.7 MAC Address

IEEE specification requires the manufacturer to store a unique 6-byte MAC or Ethernet Address in the permanent memory of each network device. The MAC address of the LIP-6812/LIP-6830 can be viewed but not changed.

To view the MAC address:

- 1) Press the  button.
- 2) Press  button, or move cursor to **1.Network Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **7.MAC Address** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) View the MAC (Ethernet) Address of your LIP-6812/LIP-6830.



- 5) Press the  button to exit from the menu.

3.4.8 VLAN Settings

VLAN settings define the Ethernet frame priority and VLAN identification in accordance with IEEE 802.1p/Q standards. Separate VLAN tags are assigned for the LIP-6812/LIP-6830 PC port and the LAN (voice) port. When the VLAN id is assigned, only frames with the assigned ID are accepted and all voice frames sent by the LIP-6812/LIP-6830 include the VLAN ID assigned to the LAN port.



For proper operation, other network elements (LAN switches and Default Gateway) must support and be configured with proper the VLAN parameters.

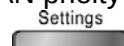
VLAN settings can not be changed if CDP is enabled.

Changing VLAN parameters requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

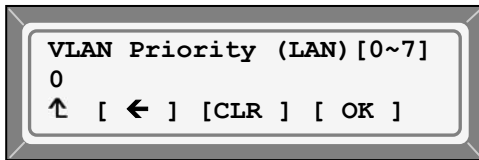
3.4.8.1 VLAN Priority (LAN)

The VLAN Priority (LAN) establishes the priority for Ethernet frames from the LIP-6812/LIP-6830 voice port including signaling and voice packets. Setting the VLAN ID to 0 disables VLAN framing and only standard Ethernet frames are sent.

To assign VLAN priority for the LAN (voice) port:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **1.Network Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.

- 3) Press  button, or move cursor to **8.VLAN Settings** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press  button, or move cursor to **1.VLAN Priority (LAN)** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 5) Input the VLAN Priority for the LAN port using the Dial pad.



- 6) Press the **[OK]** Softkey to save your Configuration.
- 7) Press the  button to exit from the menu.



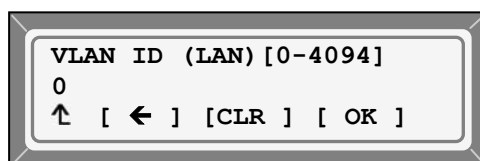
Changing the VLAN Priority for the LAN port requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.
A VLAN priority of 5 for the LAN port is default and recommended.
To disable VLANs, assign the VLAN ID as '0'.

3.4.8.2 VLAN ID (LAN)

The VLAN ID (LAN) assigns the identification for Ethernet frames for the LIP-6812/LIP-6830 voice port including signaling and voice payloads. Setting VLAN ID to 0 disables the VLAN framing and only standard Ethernet frames are sent.

To assign VLAN ID for the LAN (voice) port:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **1.Network Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **8.VLAN Settings** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press  button, or move cursor to **2.VLAN ID (LAN)** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 5) Input the VLAN ID for the LAN port using the Dial pad.



- 6) Press the **[OK]** Softkey to save your Configuration.
- 7) Press the  button to exit from the menu.

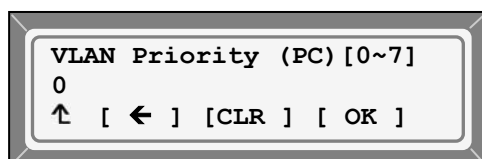
- i** Changing the VLAN ID for the LAN port requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.
To disable VLANs, assign the VLAN ID as '0'.

3.4.8.3 VLAN Priority (PC)

The VLAN Priority (PC) establishes the priority for Ethernet frames for the LIP-6812/LIP-6830 PC port. Setting the VLAN ID to 0 disables VLAN framing and only standard Ethernet frames are sent.

To assign VLAN priority for the PC port:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **1.Network Configuration** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **8.VLAN Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Press  button, or move cursor to **3.VLAN Priority (PC)** using the [Next]/[Prev] Softkeys, and press the [OK] Softkeysoftkey.
- 5) Input the VLAN Priority for the PC port using the Dial pad.



- 6) Press the [OK] Softkey to save your Configuration.
- 7) Press the  button to exit from the menu.

- i** Changing the VLAN Priority for the PC port requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.
To disable VLANs, assign the VLAN ID as '0'.
A VLAN priority of 3 for the PC port is default and recommended.

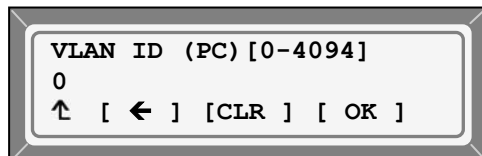
3.4.8.4 VLAN ID (PC)

The VLAN ID (PC) assigns the identification for Ethernet frames for the LIP-6812/LIP-6830 PC port. Setting VLAN ID to 0 disables VLAN framing and only standard Ethernet frames are sent.

To assign VLAN ID for the LAN (voice) port:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure 3.3 Lock/Unlock Configuration).

- 2) Press **1** button, or move cursor to **1.Network Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press **8** button, or move cursor to **8.VLAN Settings** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press **4** button, or move cursor to **4.VLAN ID (PC)** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 5) Input the VLAN ID for the PC port using the Dial pad.



- 6) Press the **[OK]** Softkey to save your Configuration.
- 7) Press the **Settings** button to exit from the menu.



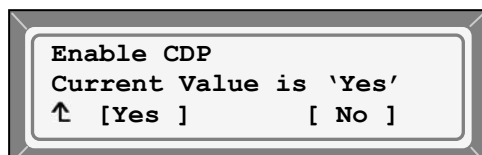
Changing the VLAN ID for the PC port requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.
To disable VLANs, assign the VLAN ID as '0'.

3.4.9 CDP

The LIP Phone can be assigned to employ the discovery protocol to determine if VLANs are to be used and the associated VLAN Id.

To enable the automated discovery process:

- 1) Press the **Settings** button. If the LCD Menu is locked, use the unlock procedure 3.3 Lock/Unlock Configuration).
- 2) Press **1** button, or move cursor to **1.Network Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press **9** button, or move cursor to **9.CDP** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Select the desired Softkey (**[Yes]** or **[No]** to enable or diisable CDP.



- 5) Press the **[OK]** Softkey to save your Configuration.
- 6) Press the **Settings** button to exit from the menu.



Changing the CDP status requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

If CDP is enabled, changes made to VLAN settings will be overridden during reboot.

3.5 SIP Configuration

Within the **SIP Configuration** selection, parameters for each call appearance, or Line, are established to allow the LIP Phone to register and authenticate the Line with the appropriate Call Server. Additionally, general Voice over IP (VoIP) characteristics are assigned, such as Outbound Proxy, which is employed for SIP requests and responses.

Lines are assigned to the LIP Phone buttons in consecutive order from the 1st button to the maximum number of Lines assigned from the Web Manager, or the downloaded Configuration file. As a default, the maximum number of Lines is 2 and only the first two Line appearances may be assigned using the LCD Menu. For additional Lines, the Web Manager or downloaded Configuration file must be used. For each Line the Call Server address, authorization ID/password, Line type and special Line parameters can be viewed and changed.



For proper operation, the 1st Line button should be assigned as an appearance of the User's Line. For features where one-button Line access is used, such as Speed Dial, the LIP Phone employs the 1st Line button.

3.5.1 SIP Configuration, Line Parameters

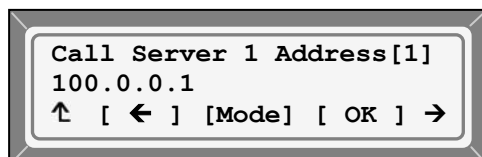
Parameters in this section are assigned for each SIP call appearance or Line.

3.5.1.1 Call Server Address

The Call Server Address is the IP Address or FQDN of the LIP Phone telephony host server. A Call Server Address is required for proper operation. Different Call Servers can be defined for each Line.

To assign the Call Server Address:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Enter the Line number or move cursor using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey to select a Line.
- 4) Press  button, or move cursor to **1.Call Server Address** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 5) Input the Call Server IP or FQDN for the LIP-6812/LIP-6830 using the Dial pad.



- 6) Press the **[OK]** Softkey to save your Configuration.
- 7) Press the  button to exit from the menu.

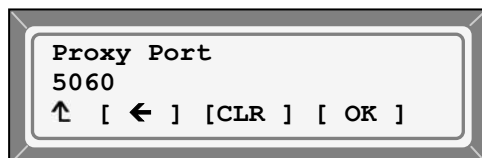
- i** Changing the Call Server Address requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.
To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E* for the character mapping of Dial pad digits).

3.5.1.2 Proxy Port

The Proxy Port defines the TCP/UDP port number employed for SIP signalling transport. In common practice, port number '5060' is used.

To change the Proxy Port number:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Enter the Line number or move cursor using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey to select a Line.
- 4) Press  button, or move cursor to **2.Proxy Port** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 5) Input the Proxy Port for the LIP-6812/LIP-6830 using the Dial pad.



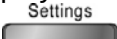
- 6) Press the **[OK]** Softkey to save your Configuration.
- 7) Press the  button to exit from the menu.

- i** Changing the Proxy Port requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

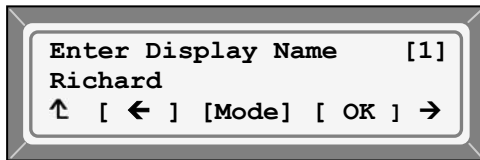
3.5.1.3 Display Name

When assigned, the Display Name is used in SIP headers as the Caller ID name.

To enter a Display Name:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.

- 3) Enter the Line number or move cursor using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey to select a Line.
- 4) Press  button, or move cursor to **3.Display Name** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 5) Input the Display Name for the LIP-6812/LIP-6830 using the Dial pad.



- 6) Press the **[OK]** Softkey to save your Configuration.
- 7) Press the  button to exit from the menu.

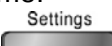


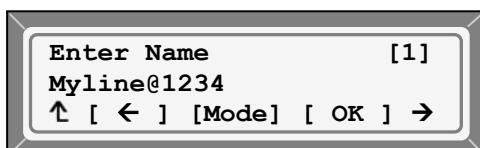
To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E*. for the character mapping of Dial pad digits).

3.5.1.4 Name

The Name is used in SIP headers as the User ID or account assigned in the Call Server. A Name is required for proper operation and must match the User ID or account assigned in the Call Server.

To enter a Name:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Enter the Line number or move cursor using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey to select Line.
- 4) Press  button, or move cursor to **4.Name** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 5) Input the Name for the LIP-6812/LIP-6830 using the Dial pad.



- 6) Press **[OK]** Softkey to save your Configuration.
- 7) Press the  button to exit from the menu.



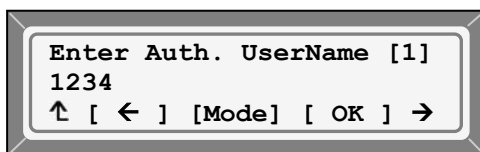
To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E.* for the character mapping of Dial pad digits).

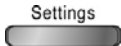
3.5.1.5 Authentication User Name

The Authentication User Name is used to authenticate the Line appearance with the SIP Call Server.

To assign the Authentication UserName:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Enter the Line number or move cursor using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey to select a Line.
- 4) Press  button, or move cursor to **5.Auth. Username** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 5) Input the Authentication User Name for the LIP-6812/LIP-6830 using the Dial pad.



- 6) Press the **[OK]** Softkey to save your Configuration.
- 7) Press the  button to exit from the menu.

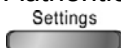


To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E.* for the character mapping of Dial pad digits).

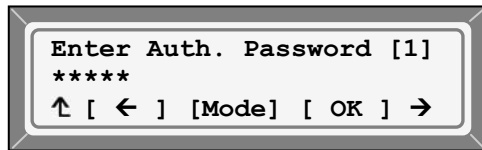
3.5.1.6 Authentication Password

The Authentication Password is used in conjunction with the Authentication Name to authenticate the Line appearance with the SIP Call Server.

To assign the Authentication Password:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Enter the Line number or move cursor using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey to select a Line.

- 4) Press  button, or move cursor to **6.Auth. Password** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 5) Input the Authentication Password for the LIP-6812/LIP-6830 using the Dial pad.



- 6) Press the **[OK]** Softkey to save your configuration.
- 7) Press the  button to exit from the menu.



To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E.* for the character mapping of Dial pad digits).

3.5.1.7 Registration Status

The status of the Line registration with the SIP Call Server can be viewed. The status is displayed as OK, NOK (Not OK) or Undefined (when no Call Server Address is assigned).

To view the Line registration status:

- 1) Press the  button.
- 2) Press  button, or move cursor to **2.SIP Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Enter the Line number or move cursor using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey to select a Line.
- 4) Press  button, or move cursor to **7.Reg. Status:** using the **[Next]/[Prev]** Softkeys, to check login status.
- 5) Press the  button to exit from the menu.

3.5.1.8 Line Type

Line buttons represent the SIP call appearance for a User ID or account. The LIP-6812/LIP-6830 support three Line types:

- Private Line
- Shared
- Direct Station Selction (DSS)/ Busy Lamp Field (BLF) Call Coverage Line

It is intended the first two Line buttons be configured as the User's Line (Private or Shared); these Lines are employed when automatic Line access is required, such as Speed Dial.

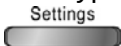
A Shared appears at more than a single extension and status must be requested from the server. The Shared Line button accesses the Line for incoming and outgoing calls and the LEDs indicate the Line status.

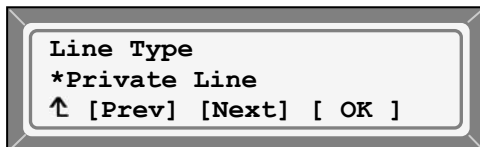
A DSS Line incorporates three functions:

- DSS – while the Line is idle, the button dials the associated extension.
- BLF– the LEDs of the Line Button display the Line status.
- Call Coverage – when a call is received on the Line, the button accesses the call.

NOTE: The DSS Line must be a Shared Line in the Call Sever.

To assign the Line type:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Enter the Line number or move cursor using the [Next]/[Prev] Softkeys, and press the [OK] Softkey to select a Line.
- 4) Press  button, or move cursor to **8.Line Type** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 5) Select the Type for the Line using the [Next]/[Prev] Softkeys, and press the [OK] Softkey (Private Line, Shared Line, or DSS Line).



- 6) Press the [OK] Softkey to save your Configuration.
- 7) Press the  button to exit from the menu.



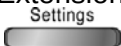
Changing a Line Type requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

An asterisk * is displayed in front of the current selection.

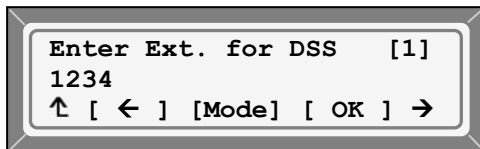
3.5.1.9 Extension for DSS Line

When a Line is assigned as a DSS, the associated extension number must be assigned. Note do not assign a DSS extension number for a Private or Shared Line type.

To assign an Extension for a DSS Line,

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using [Next]/[Prev] Softkeys, and press [OK] Softkey.

- 3) Enter the Line number or move cursor using **[Next]/[Prev]** Softkeys, and press **[OK]** Softkey to select a Line.
- 4) Press  button, or move cursor to **9.Extension for DSS** using **[Next]/[Prev]** Softkeys, and press **[OK]** Softkey.
- 5) Input the Extension number for the DSS Line using the Dial pad.



- 6) Press **[OK]** Softkey to save your configuration.
- 7) Press the  button to exit from the menu.



The DSS Extension should only be assigned for a DSS Line. Do not assign a DSS extension for a Private or Shared Line.

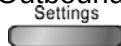
3.5.2 SIP Configuration, General Parameters

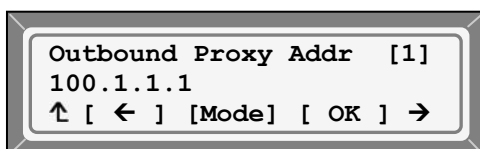
Parameters in this section are assigned to configure the overall SIP operation.

3.5.2.1 Outbound Proxy Address

The LIP Phone can be configured to send SIP requests and responses to an Outbound Proxy Address instead of to the SIP Call Server IP address configured in Section 3.5.1.1. The address may be an IP address or a FQDN.

To assign an Outbound Proxy address

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **3.Outbound Proxy Addr.** Using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Input the Outbound Proxy address for the LIP-6812/LIP-6830 using the Dial pad.



- 5) Press the **[OK]** Softkey to save your Configuration.
- 6) Press the  button to exit from the menu.



To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E*. for the character mapping of Dial pad digits).

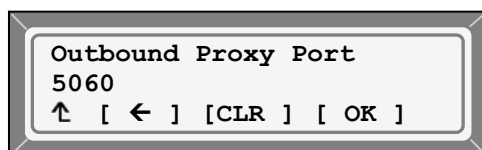
Changing the Outbound Proxy Address requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

3.5.2.2 Outbound Proxy Port

When an Outbound Proxy Server is defined, the associated Port must be defined as the Outbound Proxy Port. All SIP requests will be sent to the assigned port instead of the Proxy Port configured in Section 3.5.1.2.

To assign the Outbound Proxy Port:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **4.Outbound Proxy Port** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Input the Outbound Proxy Port for the LIP-6812/LIP-6830 using the Dial pad.



- 5) Press the **[OK]** Softkey to save your Configuration.
- 6) Press the  button to exit from the menu.

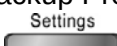


Changing the Outbound Proxy Port requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

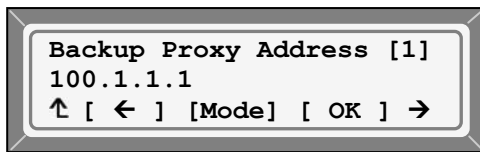
3.5.2.3 Backup Proxy Address

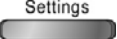
When an Outbound Proxy is employed to receive SIP requests, a backup Proxy server can be defined for use should the primary proxy fail to respond; the Backup Proxy Address can be defined as an IP address or a FQDN.

To assign a Backup Proxy Address:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.

- 3) Press  button, or move cursor to **5.Backup Proxy Address** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Input the Backup Proxy address for the LIP-6812/LIP-6830 using the Dial pad.



- 5) Press the **[OK]** Softkey to save your Configuration.
- 6) Press the  button to exit from the menu.



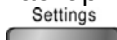
Changing the Outbound Proxy Port requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

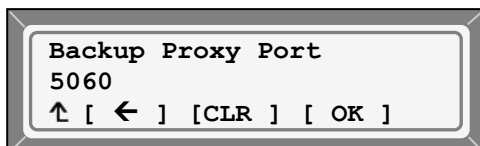
To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E.* for the character mapping of Dial pad digits).

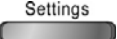
3.5.2.4 Backup Proxy Port

When a Backup Proxy is employed (refer to Section 3.5.2.3), the associated Port must be defined for the Backup Proxy Port.

To assign the Backup Proxy Port:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **6.Backup Proxy Port** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Input the Backup Proxy Port for the LIP-6812/LIP-6830 using the Dial pad.



- 5) Press the **[OK]** Softkey to save your Configuration.
- 6) Press the  button to exit from the menu.



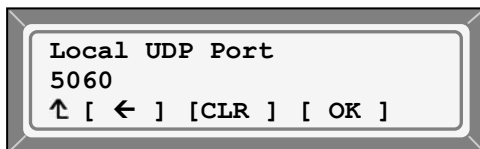
Changing the Backup Proxy Port requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

3.5.2.5 Local UDP Port

The Local UDP Port defines the port, normally 5060, the LIP Phone will use to send and receive SIP signalling packets. Particularly when behind a firewall, in some instances the normal port may not be available and a different port can be defined.

To set the Local UDP Port:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **7.Local UDP Port** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Input the Backup Proxy Port for the LIP-6812/LIP-6830 using the Dial pad.



- 5) Press the [OK] Softkey to save your Configuration.
- 6) Press the  button to exit from the menu.



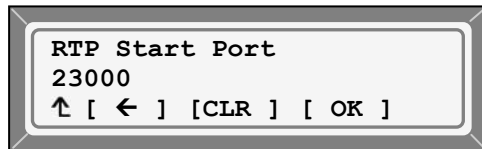
Changing the Local UDP Port requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

3.5.2.6 RTP Start Port

When a SIP call is established, digitized voice signals are sent and received in Real-Time Protocol (RTP) packets. The port used for RTP packets is usually 23000, but a different port may be defined.

To assign an RTP port:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **8.RTP Start Port** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Input the RTP Start Port for the LIP-6812/LIP-6830 using the Dial pad.



5) Press the [**OK**] Softkey to save your Configuration.

6) Press the  button to exit from the menu.



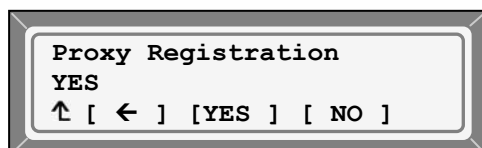
Changing the RTP Start Port requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

3.5.2.7 Proxy Registration

If Proxy Registration is set to [**Yes**], the LIP-6812/LIP-6830 will register with the appropriate Call or Proxy Server upon initial power-up, during a reboot and at periodic intervals based on the Registration timer (refer to Section 3.5.2.8).

To enable Proxy Registration:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the [Next]/[Prev] Softkeys, and press the [**OK**] Softkey.
- 3) Press  button, or move cursor to **9.Proxy Registration** using the [Next]/[Prev] Softkeys, and press the [**OK**] Softkey.
- 4) To enable SIP registration, press the [**Yes**] Softkey; to disable SIP registration, press the [**No**] Softkey.

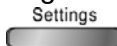


5) Press the  button to exit from the menu.

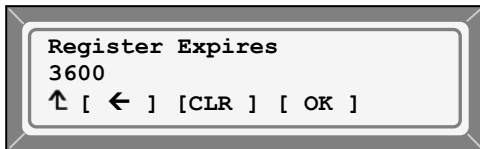
3.5.2.8 Register Expires

To assure a connection with the Proxy or SIP Call Server, the LIP Phone will periodically re-register. The interval between re-registration is based on the Register Expires timer, which can be set from 0 to 6400 seconds (default 3600 seconds).

To modify the Register Expires timer:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).

- 2) Press **2** button, or move cursor to **2.SIP Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press **1 0** button in turn, or move cursor to **10.Register Expires** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.



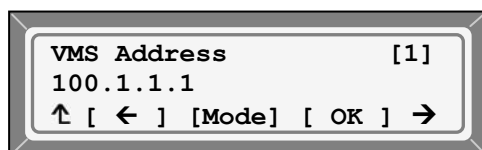
- 4) Input the Registration Expiration time for the LIP-6812/LIP-6830 using the Dial pad.
- 5) Press the **[OK]** Softkey to save your Configuration.
- 6) Press the **Settings** button to exit from the menu.

3.5.2.9 VMS Address

The Voice Mail Server (VMS), address is the User's voice mail system IP address or access phone number.

To assign the VMS address:

- 1) Press the **Settings** button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press **2** button, or move cursor to **2.SIP Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press **1 1** button in turn, or move cursor to **11.VMS Address** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.



- 4) Input the VMS Address for the LIP-6812/LIP-6830 using the Dial pad.
- 5) Press the **[OK]** Softkey to save your Configuration.
- 6) Press the **Settings** button to exit from the menu.



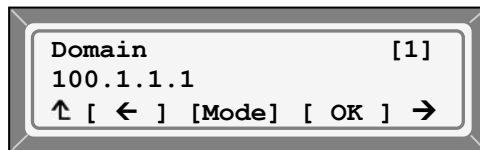
To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E*. for the character mapping of Dial pad digits).

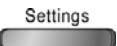
3.5.2.10 Domain

The Domain specifies the domain for SIP service when the provider desires to use a specific SIP domain.

To assign the Domain

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **2.SIP Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press   button in turn, or move cursor to **12.Domain** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.



- 4) Input the Domain for the LIP Phone using the Dial pad.
- 5) Press the **[OK]** Softkey to save your Configuration.
- 6) Press the  button to exit from the menu.



To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E*. for the character mapping of Dial pad digits).

3.6 Phone Settings

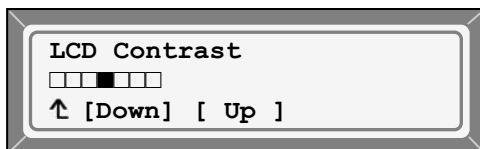
Within the **Phone Settings** selection, LCD contrast, Ring type, Ringer off, Headset Auto mode, DSS Registration and Flexible button configurations can be viewed and changed.

3.6.1 LCD Contrast

The contrast of the LCD can be adjusted for best viewing.

To adjust the LCD Contrast:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **1.LCD Contrast** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press the **[Down]** Softkey to decrease the LCD contrast, or press the **[Up]** Softkey to increase the LCD contrast.

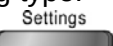


- 5) Press the  button to exit from the menu.

3.6.2 Ring Type

The LIP-6812/LIP-6830 can be set to provide one of seven distinctive Ring signals or tones. By assigning different Ring types to closely located phones, the user can quickly identify the ringing phone.

To set the Ring type:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **2.Ring Type** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Select Ring Type using the **[Next]** Softkey. Press the **[Play]** Softkey to hear the the selected tone.



- 5) Press the [OK] Softkey to change to the selected Ring type.
- 6) Press the  button to exit from the menu.

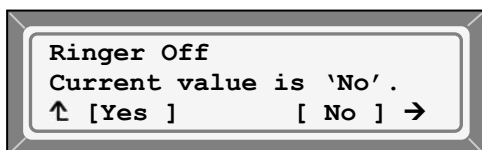


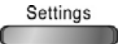
An asterisk * is displayed in front of the current selection.

3.6.3 Ringer Off

The LIP Phones can be programmed not to ring when an incoming call is received.

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **3.Ringer Off** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.



- 4) Press the [Yes] Softkey to enable Ringer Off, or press the [No] Softkey to disable Ringer Off.
- 5) Press the  button to exit from the menu.

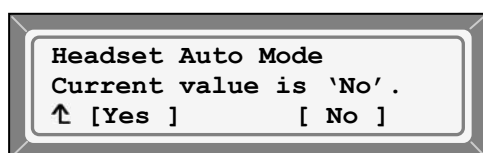
3.6.4 Headset Auto Mode

The LIP-6812 & LIP-6830 support the use of the Headset. When Headset Auto Mode is enabled, pressing a Line button will automatically connect audio to the headset. Also, redial and click-to-call will place calls with audio through the headset.

To enable Headset Auto Mode:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **4.Headset Auto Mode** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.

- 4) Press the **[Yes]** Softkey to enable the Headset Auto Mode or press the **[No]** Softkey to disable the Headset Auto Mode.



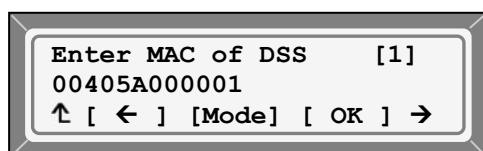
- 5) Press the  button to exit from the menu.

3.6.5 DSS Registration

A DSS console with 48 flexible keys can be associated with the LIP Phone to provide additional Speed Dial buttons.

To add a DSS console to the LIP-6812/LIP-6830:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button or move cursor to **5.DSS Registration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Input the MAC address of DSS console using the Dial pad, and press the **[OK]** Softkey to save your Configuration.



- 5) Press the  button to exit from the menu.



To remove a DSS console from LIP-6812/LIP-6830, delete each digit of the MAC address using the **[←]** Softkey and then press the **[OK]** Softkey.

If the DSS console is connected successfully, the status of connection is shown in the **8.Information** menu

To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E* for the character mapping of Dial pad digits).

The DSS Console provides special LED indications for troubleshooting.

Problem	Explanation
After DSS Console is connected to power, the 24 LEDs in upper- and down-side blink red alternatively.	The LAN link to DSS Console is down

Problem	Explanation
After DSS Console is connected to power, the 4 LEDs blink red sequentially.	DSS Console isn't associated with an IP Phone

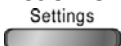
3.6.6 Flexible Button Setting

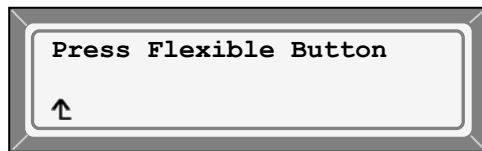
The programmable buttons not assigned as Line buttons can be configured for access to various functions. Available Functions and a description of the each is provided in Table 3-1.

Table 3-1 Flexible Button Functions

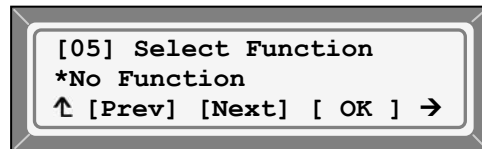
Feature		Description	Main	DSS
0	No Function	Unassigned	O	O
1	Speed Dial Function	Dials to the assigned number	O	O
2	Phone Book Function	Views the personal phone book	O	-
3	Call Log Function	Views the call log list	O	-
4	Mute Function	Toggles the Mute feature On or Off	O	-
5	Headset Function	Toggles the Headset On or Off	O	-
6	Redial Function	Dials to the last number placed calls	O	-
7	Return Call Function	Dials to the last number received calls	O	-
8	Set Call Forwarding	Sets the call forwarding configuration	O	-
9	Conference Function	1. Makes a new conference call 2. Joins two calls for conference 3. Ends the conference call	O	-
10	Transfer Function	1. Makes a new transfer call 2. Joins two calls for transfer	O	-
11	Hold Function	Places an active call on hold	O	-
12	Do not disturb	Toggles the DND On or Off	O	-
13	Set Ringer Off	Toggles the ringer On or Off	O	-
14	Message Function	Views the number of new and old messages stored in the Voice Mail server, and dials the Voice Mail server by pressing [Dial] Softkey	O	-

To assign a function on a Flexible button:

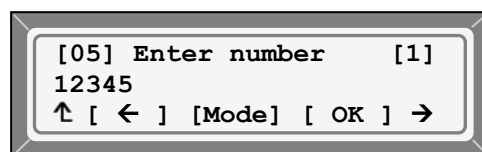
- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **6.Flexible Key Setting** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Select the desired flexible button.



- 5) Select a function using the **[Next]/[Prev]** soft key and press the **[OK]** Softkey (refer to the Table 3-1 Flexible Button Functions).



- 6) If the selected function is Speed Dial Function, enter the number for speed dialing and press the **[OK]** Softkey.



- 7) Press the  button to exit from the menu.



Only Flexible buttons not assigned as a Line can be assigned a function.

In the LIP-6812/LIP-6830, flexible buttons 1 and 2 are assigned as the User extension's primary and secondary line appearance and can't be assigned as another function.

In the LIP-6812, flexible button 12 is assigned as the Headset On/Off button, and can't be assigned as another function.

The 48 buttons of a DSS console can be assigned only as Speed Dial Function.

To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E* for the character mapping of Dial pad digits).

3.6.7 Time Configuration

Within the **Time Configuration** selection, the IP Address or FQDN of the desired Simple Network Time Protocol (SNTP) server and the local time zone are selected and Daylight Savings Time (DST) is enabled.

It is recommended that the following SNTP server addresses be used for Time Configuration:

- pool.ntp.org
- clock.via.net
- ntp.nasa.gov
- tick.ucla.edu

3.6.7.1 SNTP Server Address

SNTP is a standard protocol that permits a network device to obtain the network's current time. For operation with SNTP, the LIP-6812/LIP-6830 requires the SNTP Server IP Address or FQDN.

To assign the SNTP server address:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **7.Time Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press  button, or move cursor to **1.SNTP Server Address** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 5) Input the SNTP Server IP Address for the LIP-6812/LIP-6830 using the Dial pad.



- 6) Press the **[OK]** Softkey to save your Configuration.
- 7) Press the  button to exit from the menu.

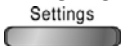


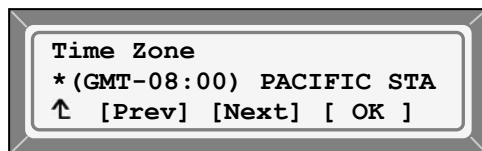
To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E*. for the character mapping of Dial pad digits).

3.6.7.2 Time Zone

For proper operation of the clock in the LIP-6812/LIP-6830, the local Time Zone must be entered in phone memory.

To assign the Time-Zone:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **7.Time Configuration** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press  button, or move cursor to **2.Time Zone** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 5) Select the Time Zone desired using the **[Next]/[Prev]** Softkeys.



6) Press the [**OK**] Softkey to change to the selected time zone.

7) Press the  button to exit from the menu.

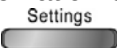


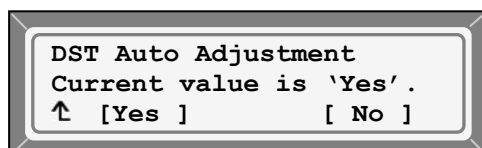
An asterisk ***** is displayed in front of the current selection (select the nearest region as shown in *Appendix D*).

3.6.7.3 DST Auto Adjustment

The LIP-6812 & LIP-6830 can automatically adjust for DST when enabled.

To enable automatic Day Light Savings time:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [**OK**] Softkey.
- 3) Press  button, or move cursor to **7.Time Configuration** using the [Next]/[Prev] Softkeys, and press the [**OK**] Softkey.
- 4) Press  button, or move the cursor to **3.DST Auto Adjustment** using the [Next]/[Prev] Softkeys, and press the [**OK**] Softkey.
- 5) Press the [**Yes**] Softkey to enable DST Auto Adjustment, or press the [**No**] Softkey to disable DST Auto Adjustment.

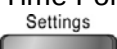


6) Press the  button to exit the menu.

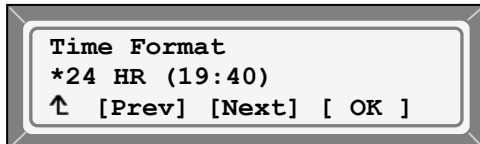
3.6.7.4 Time Format

The format of the LCD time display can be set to disable time display, display 12 hour format, or display 24 hour format.

To modify the Time Format:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).

- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **7.Time Configuration** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Press  button, or move cursor to **4.Time Format** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 5) Press the [Next]/[Prev] to select the Time Format and press the [OK] Softkey to set the format.



- 6) Press the  button to exit the menu.



An asterisk * is displayed in front of the current selection.

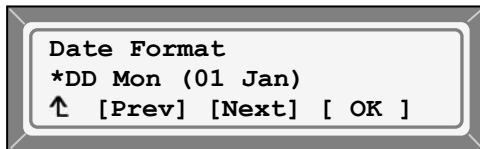
3.6.7.5 Date Format

The format of the LCD date display can be disabled or displayed in the one of the formats below:

MM/DD (01/22)
 DD/MM (22/01)
 DD Month (22 Jan)
 Month DD (Jan 22).

To modify the Date Format:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **7.Time Configuration** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Press  button, or move cursor to **5.Date Format** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 5) Press the [Next]/[Prev] to select the Time Format and press the [OK] Softkey to set the format.



- 6) Press the  button to exit the menu.



An asterisk * is displayed in front of the current selection.

3.6.8 S/W Update

Within the **S/W Update** selection, the type of Provisioning (TFTP/HTTPS), the Server Address, HTTPS Verification settings, Software Download flag, Configuration Download flag and DHCP Options can be viewed and changed.

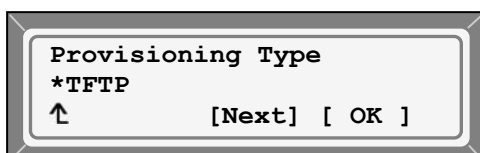
3.6.8.1 Provisioning Type

The LIP-6812/LIP-6830 supports two Provisioning protocols:

- Trivial File Transfer Protocol (TFTP) – a simple transfer mechanism using UDP but lacks security and TFTP ports are often blocked at firewalls.
- Hyper-Text Transfer Protocol/ Secure (HTTPS) – employs TCP and using SSL (Secure Sockets Layer) encryption is a more secure method. In addition, ports employed by HTTPS are commonly available.

To assign the Provisioning Type:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **8.S/W Update** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press  button, or move cursor to **1.Provisioning Type** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 5) Select the Provisioning Type (TFTP or HTTPS) using the Dial pad, and press the **[OK]** Softkey to save your Configuration.



- 6) Press the  button to exit the menu.



Changing the Provisioning Type requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

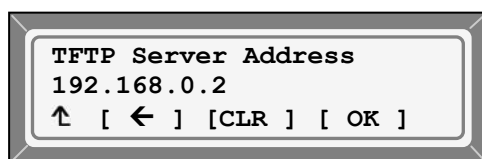
An asterisk * is displayed in front of the current selection.

3.6.8.2 TFTP Server Address

When TFTP provisioning is selected, the IP address of the TFTP server must be defined. The TFTP Server address may be retrieved automatically from the DHCP server or set manually.

To enter a TFTP Server Address:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **8.S/W Update** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Press  button, or move cursor to **2.TFTP Server Address** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 5) Input the TFTP Server IP Address using the Dial pad, and press the [OK] Softkey to save your Configuration.



- 6) Press the  button to exit the menu.



Changing the TFTP Server Address requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

3.6.8.3 HTTPS Provisioning

The HTTP/HTTPS server URL, is a required parameter for HTTP/HTTPS provisioning. Normally, TCP port 80 is employed for HTTP, and port 443 is employed for HTTPS file transfers. Also a User Name and Password is assigned, if required by the HTTP/HTTPS server for authentication.



The HTTPS server must support SSL for proper operation.

3.6.8.3.1 Provisioning URL

The provisioning URL is the URL of the HTTP/HTTPS server.

To assign the HTTPS Provisioning URL:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **8.S/W Update** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Press  button, or move cursor to **3.HTTPS Provisioning** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 5) Press  button, or move cursor to **1.Provisioning URL** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 6) Input the Provisioning URL using the Dial pad, and press the [OK] Softkey to save your Configuration.



- 7) Press the  button to exit the menu.



Changing the Provisioning URL requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

To enter alpha-numeric characters select the [Mode] Softkey (refer to *Appendix E*. for the character mapping of Dial pad digits).

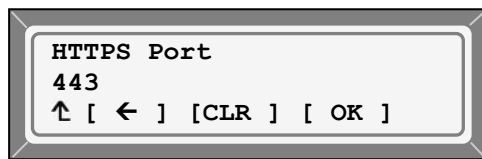
3.6.8.3.2 HTTPS Port

The default port used for HTTPS is usually 443, but it can be modified.

To modify the HTTPS Port:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **8.S/W Update** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Press  button, or move cursor to **3.HTTPS Provisioning** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 5) Press  button, or move cursor to **2.HTTPS Port** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.

- 6) Input the HTTPS Port using the Dial pad, and press the [**OK**] Softkey to save your Configuration.



- 7) Press the  button to exit the menu.



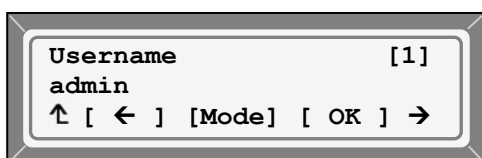
Changing the HTTPS Port requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

3.6.8.3.3 User Name

In some cases the HTTP/HTTPS server may require a User Name (ID) and Password for authentication prior to allowing file access.

To set the User Name:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press [**OK**] Softkey.
- 3) Press  button, or move cursor to **8.S/W Update** using the [Next]/[Prev] Softkeys, and press the [**OK**] Softkey.
- 4) Press  button, or move cursor to **3.HTTPS Provisioning** using the [Next]/[Prev] Softkeys, and press the [**OK**] Softkey.
- 5) Press  button, or move cursor to **3.Username** using the [Next]/[Prev] Softkeys, and press the [**OK**] Softkey.
- 6) Input the Username using the Dial pad, and press the [**OK**] Softkey to save your



configuration.

- 7) Press the  button to exit the menu.



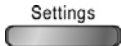
Changing the User Name requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

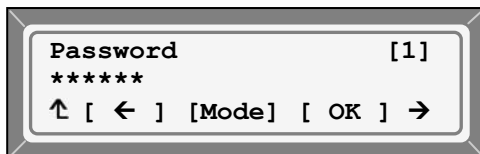
To enter alpha-numeric characters select the [**Mode**] Softkey (refer to *Appendix E*. for the character mapping of Dial pad digits).

3.6.8.3.4 Password

In some cases the HTTP/HTTPS server may require a User Name (ID) and Password for authentication prior to allowing file access.

To set the Password:

- 8) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 9) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 10) Press  button, or move cursor to **8.S/W Update** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 11) Press  button, or move cursor to **3.HTTPS Provisioning** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 12) Press  button, or move cursor to **4.Password** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 13) Input the Password using the Dial pad, and press the [OK] Softkey to save your Configuration.



- 14) Press the  button to exit the menu.



Changing the Password requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

To enter alpha-numeric characters select the [Mode] Softkey (refer to *Appendix E*. for the character mapping of Dial pad digits).

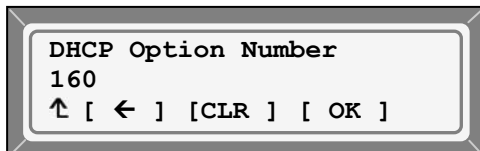
3.6.8.3.5 HTTPS URL DHCP Option Number

The custom DHCP Option where the HTTPS Provisioning server URL is located, as a default Option 160 is employed.

To modify the HTTPS Port:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.

- 3) Press  button, or move cursor to **8.S/W Update** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Press  button, or move cursor to **3.HTTPS Provisioning** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 5) Press  button, or move cursor to **5.DHCP Option Number** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 6) Input the DHCP Option, 1 to 255, using the Dial pad, and press the [OK] Softkey to save your Configuration.



- 7) Press the  button to exit the menu.



Changing the DHCP Option requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

3.6.8.4 S/W Download Flag

When Power is applied or a Reboot is processed, the LIP-6812/LIP-6830 can be assigned to automatically check and download LIP Phone Software from the defined provisioning Server. The LIP Phone will download software if the software versions are different and the the S/W Download flag is enabled.

To set the S/W Download Flag:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **8.S/W Update** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Press  button, or move cursor to **4.S/W Download Flag** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 5) Press the [Yes] Softkey to enable the S/W Download, or press the [No] Softkey to disable the S/W Download.



- 6) Press the  button to exit the menu.

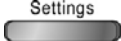


Changing the S/W Download Flag requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

3.6.8.5 Config Download Flag

When Power is applied or a Reboot is processed, the LIP-6812/LIP-6830 can automatically download a Global (system) and a Phone specific (MAC) Configuration file from the defined provisioning Server; to download a configuration file during provisioning, the Config Download flag must be enabled.

To set the Config Download Flag:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **8.S/W Update** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Press  button, or move cursor to **5.Config Download Flag** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 5) Press the [Yes] Softkey to enable the Configuration Download, or press the [No] Softkey to disable the Configuration Download.



- 6) Press the  button to exit the menu.

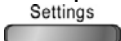


Changing the Config Download Flag requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

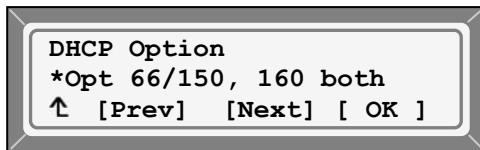
3.6.8.6 DHCP Options

The LIP Phone supports DHCP Options 66 & 150 (TFTP server) and a custom Option, default 160, for the HTTP/HTTPS URL to define the Configuration and Software download server. In some situations it is useful to disable use of the DHCP Options.

To set the DHCP Options Flag:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).

- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **8.S/W Update** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Press  button, or move cursor to **6.DHCP Option** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 5) Select the DHCP Option desired using the [Next]/[Prev] Softkeys, and press the [OK]. Options available include "Don't use any Option", "Option 66/150 only", "Option 160 only" and "Option 66/150, 160 both".



- 6) Press the  button to exit the menu.

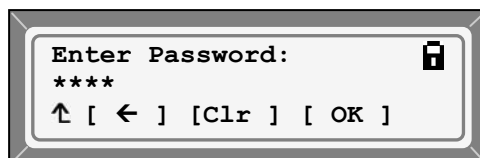


Changing the DHCP Options Flag requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

An asterisk * is displayed in front of the current selection.

3.6.9 Lock Outgoing Call

The LIP-6812/LIP-6830 can be configured to allow outgoing calls only if a Password is entered. When enabled, the LCD screen will display the password request as shown and the password must be entered prior to connecting an outgoing call.

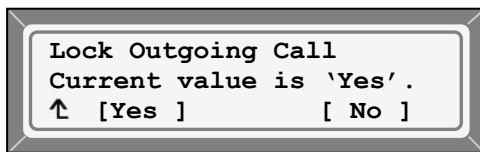


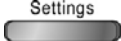
To activate this feature, the LCD password must be set (refer to Section 3.3 Lock/Unlock Configuration), and Lock Outgoing Call must be enabled.

To set the Lock Outgoing Call feature:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **9.Lock Outgoing Call** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.

- 4) Press the [**Yes**] Softkey to enable the Lock Outgoing Call, or press the [**No**] Softkey to disable the Lock Outgoing Call.



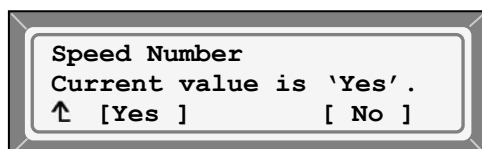
- 5) Press the  button to exit from the menu.

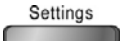
3.6.10 Speed Number

The LIP-6812/LIP-6830 includes a Phone Book which supports up to 100 entries. Numbers from the Phone Book entries can be dialed by accessing the Phone Book and selecting an entry, or by simply dialing the Speed Number (0-99) entry number when it is enabled. The Speed Number can be set in the Phone Book menu (refer to Section 3.8.1).

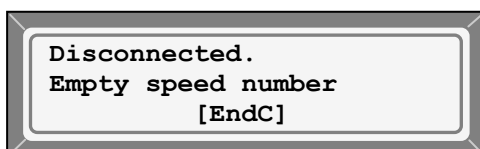
To set Speed Number operation:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **3.Phone Settings** using the [Next]/[Prev] Softkeys, and press the [**OK**] Softkey.
- 3) Press  button, or move cursor to **10.Speed Number** using the [Next]/[Prev] Softkeys, and press the [**OK**] Softkey.
- 4) Press the [**Yes**] Softkey to enable the Speed Number, or press the [**No**] Softkey to disable the Speed Number.



- 5) Press the  button to exit the menu.

NOTE: When enabled, dialing an empty speed number, will terminate the call and display the empty status of the Speed Number as shown for approximately 2 seconds.



3.7 Call Preferences

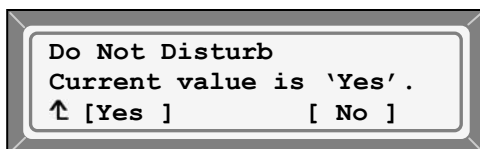
Call Preferences define various call handling features of the LIP Phone.

3.7.1 Do Not Disturb

When in Do Not Disturb mode, the LIP Phone will reject all incoming calls; Do Not Disturb is activated by an assigned flexible button and must be enabled for operation.

To enable DND activation:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **4.Call Preferences** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **1.Do Not Disturb** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press the **[Yes]** Softkey to enable 'Do Not Disturb, or press the **[No]** Softkey to disable Do Not Disturb.



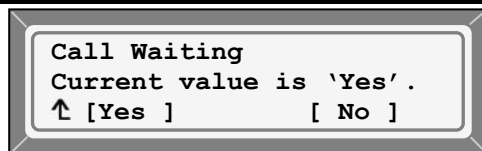
- 5) Press the  button to exit the menu.

3.7.2 Call Waiting

While you're busy on another call, a new call can be rejected or placed in a notifying state (Call Waiting).

To set Call Waiting:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **4.Call Preferences** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **2.Call Waiting** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press the **[Yes]** Softkey to enable Call Waiting, or press the **[No]** Softkey to disable Call Waiting.

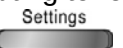


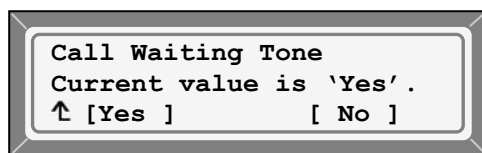
- 5) Press the  button to exit the menu.

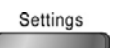
3.7.3 Call Waiting Tone

While off-hook, the LIP Phone can provide a tone to indicate a Call Waiting over the existing conversation.

To set Call Waiting tone:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **4.Call Preferences** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **3.Call Waiting Tone** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press the **[Yes]** Softkey to enable Call Waiting Tone, or press the **[No]** Softkey to disable Call Waiting Tone.

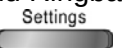


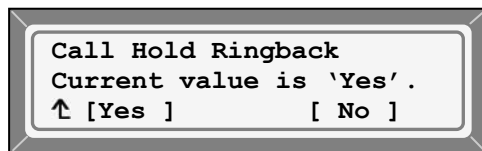
- 5) Press the  button to exit the menu.

3.7.4 Call Hold Ringback

When a call is on hold at the User extension, the LIP Phone will ring when the user returns to idle.

To set Call Hold Ringback:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **4.Call Preferences** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **4.Call Hold Ringback** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press the **[Yes]** Softkey to enable Call Hold Ringback, or press **[No]** Softkey to disable Call Hold Ringback.



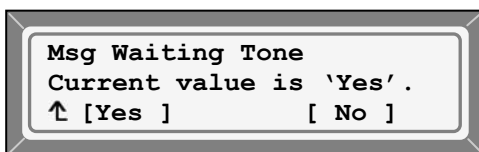
- 5) Press the  button to exit the menu.

3.7.5 Message Waiting Tone

When a Line receives an indication of a Message Waiting, the MSG LED will flash. In addition, a 'Stutter' dial-tone is activated to indicate the Message Waiting state.

To set Message Wait Tone:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **4.Call Preferences** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **5.Msg Waiting Tone** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Press [Yes] Softkey to enable Msg Waiting Tone, or press the [No] Softkey to disable MSG Waiting Tone.

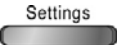


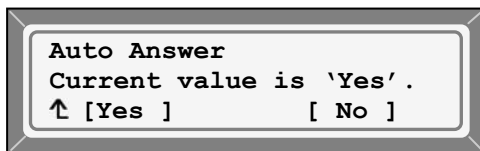
- 5) Press the  button to exit the menu.

3.7.6 Auto Answer

When idle, the LIP Phone can automatically connect an incoming caller to the Speakerphone.

To set Auto Answer:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **4.Call Preferences** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 3) Press  button, or move cursor to **6.Auto Answer** using the [Next]/[Prev] Softkeys, and press the [OK] Softkey.
- 4) Press [Yes] Softkey to enable Auto Answer, or press [No] Softkey to disable Auto Answer.



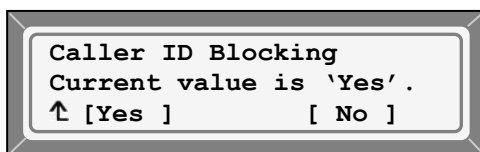
- 5) Press the  button to exit the menu.

3.7.7 Caller ID Blocking

The LIP Phone normally sends the assigned Display Name as the SIP Caller ID; the LIP Phone can send an Anonymous Caller ID in SIP headers.

To set Caller Id Bloccking:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **4.Call Preferences** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **7.Caller ID Blocking** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press the **[Yes]** Softkey to enable Caller ID Blocking, or press the **[No]** Softkey to disable Caller ID Blocking.



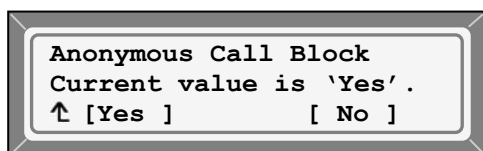
- 5) Press the  button to exit the menu.

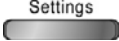
3.7.8 Anonymous Call Block

The LIP-6812 & LIP-6830 can block incoming calls that are using Anonymous Caller ID.

To set Anonymous Call Blocking:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **4.Call Preferences** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **8.Anonymous Call Block** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press the **[Yes]** Softkey to enable Anonymous Call Block, or press the **[No]** Softkey to disable Anonymous Call Block.



- 5) Press the  button to exit the menu.

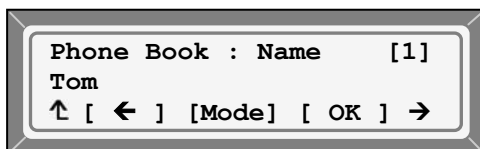
3.8 Phone Book

The LIP-6812 & LIP-6830 includes a Phone Book of names and numbers for up to 100 contacts. The Phone Book can be managed and used to place calls using the LCD Menu or using a Phone Book button assigned to the LIP Phone. Contacts can be added, edited or deleted and the Phone Book may be searched.

3.8.1 Adding a Phone Book Record

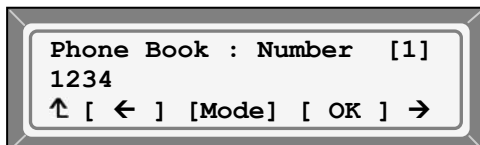
To add a new contact:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **5.Directory** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **1.Phone Book** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press the **[Add]** Softkey after moving to the next group of Softkeys using the  key.
- 5) Enter a Name for the new contact and press the **[OK]** Softkey.



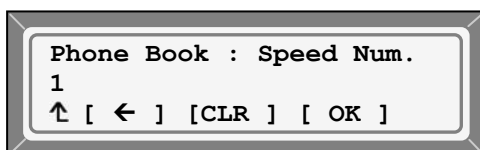
Phone Book : Name [1]
Tom
↑ [←] [Mode] [OK] →

- 6) Enter a Number for the new contact and press the **[OK]** Softkey.



Phone Book : Number [1]
1234
↑ [←] [Mode] [OK] →

- 7) Enter a Speed Number (0 - 99) for the new contact and press the **[OK]** Softkey.



Phone Book : Speed Num.
1
↑ [←] [CLR] [OK]

- 8) The new contact is added to the Phone Book and the LIP Phone returns to the Phone Book list.

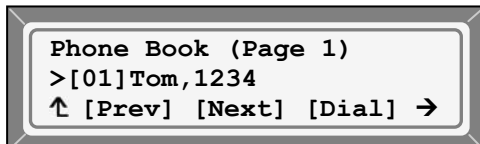


To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E.* for the character mapping of Dial pad digits).

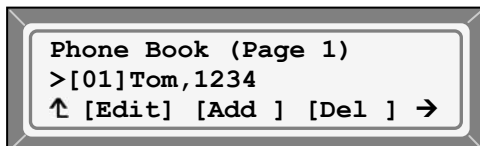
3.8.2 Editing a record

To edit a Phone Book record:

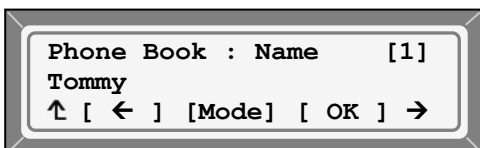
- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **5.Directory** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **1.Phone Book** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Select a contact to edit using the **[Next]/[Prev]** Softkeys.



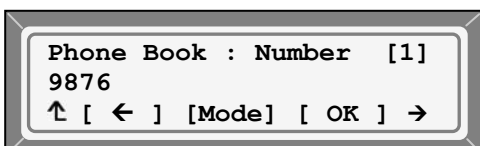
- 5) Press the **[Edit]** Softkey after moving to the next group of Softkeys using the  key.



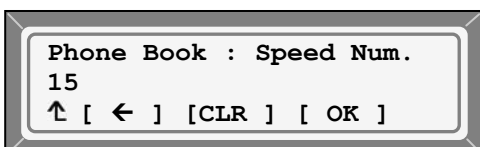
- 6) Enter the new Name for the contact and press the **[OK]** Softkey.



- 7) Enter the new Number for the contact and press the **[OK]** Softkey.



- 8) Enter the new Speed number for the contact and press the **[OK]** Softkey.



- 9) The contact is modified and the LIP-6812/LIP-6830 returns to the Phone Book list.

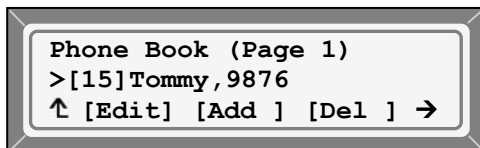


To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E*. for the character mapping of Dial pad digits).

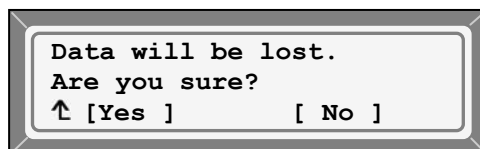
3.8.3 Deleting a Phone Book Record

To delete a Phone Book record:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **5.Directory** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **1.Phone Book** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Select a contact to edit using the **[Next]/[Prev]** Softkeys.



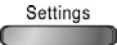
- 5) Press the **[Yes]** Softkey to delete the selected contact.

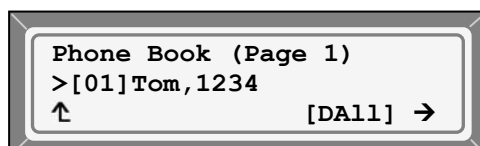


- 6) The contact is deleted and the LIP-6812/LIP-6830 returns to the Phone Book list.

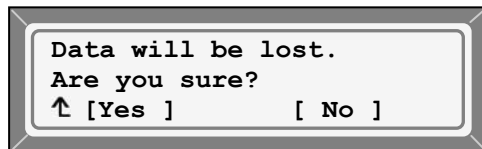
3.8.4 Deleting All Records

To delete all Phone Book records:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **5.Directory** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **1.Phone Book** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press the **[DA11]** Softkey after moving to the next group of Softkey using the  key.



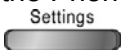
- 5) Press the **[Yes]** Softkey to delete.

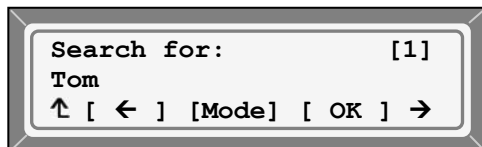


- 6) All contacts of your LIP-6812/LIP-6830 are deleted and the LIP-6812/LIP-6830 returns to the Phone Book list.

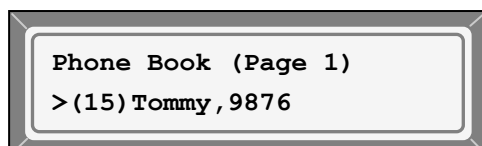
3.8.5 Searching the Phone Book

To search for the Phone Book using either Name or Number:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **5.Directory** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press  button, or move cursor to **1.Phone Book** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Press the **[Find]** Softkey after moving to the next group of Softkeys using the  key. Input a searching keyword, and press the **[OK]** Softkey.



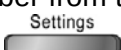
- 5) The search result is displayed (Speed Number is listed in parenthesis).



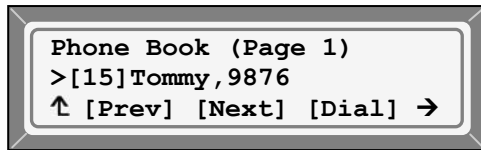
To enter alpha-numeric characters select the **[Mode]** Softkey (refer to *Appendix E*. for the character mapping of Dial pad digits).

3.8.6 Dialing from the Phone Book

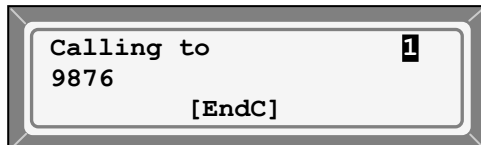
To dial a number from the Phone Book:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **5.Directory** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.

- 3) Press **1** button, or move cursor to **1.Phone Book** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 4) Select a contact to dial using the **[Prev]/[Next]** Softkeys.

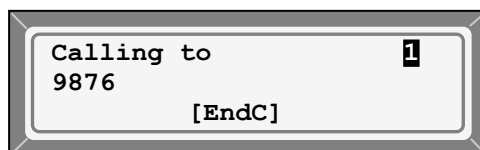
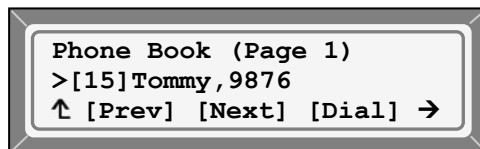


- 5) Press the **[Dial]** Softkey; the LIP-6812/LIP-6830 calls the contact.



To dial a Registered Contact using a Flexible button (refer to Section 3.6.6):

- 1) Press the Flexible key for the Phone Book function while in an idle or dial state.
- 2) Select a contact to dial using the **[Next]/[Prev]** Softkeys, and press **[Dial]** Softkey.



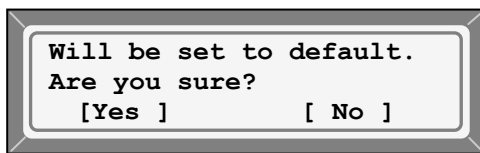
- 3) The LIP-6812/LIP-6830 calls the contact.

3.9 Default

The LIP-6812 & LIP-6830 Configuration can be returned to the Original Factory Defaults (refer to *Appendix A* for the Default Configuration).

To return to the Default Configuration:

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **6.Default** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press the **[Yes]** Softkey to set Configuration back to the Default values, or press the **[No]** Softkey to cancel.



- 4) Press the  button to exit from the menu.



Any Configuration customizing is lost upon return to the default configuration.

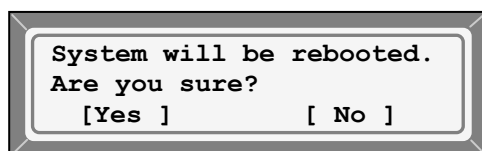
Default Configuration reset requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

3.10 Reboot

After entry of the certain Configuration settings, the LIP-6812/LIP-6830 will require a reboot to save the settings to active memory. These settings include the following:

- Network Configuration settings
- Call Server Address settings
- DSS Registration settings
- Software Update settings
- Default settings

- 1) Press the  button. If the LCD Menu is locked, use the unlock procedure (refer to Section 3.3 Lock/Unlock Configuration).
- 2) Press  button, or move cursor to **9.Reboot** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.
- 3) Press the **[Yes]** Softkey to reboot the LIP-6812/LIP-6830, or press the **[No]** Softkey to cancel this menu.



- 4) If you press [**No**] in Step 3), press the  button to exit the menu.

4. Web Manager Configuration

In addition to the LCD Menu Configuration parameters, the Web Manager can access parameters for maximum Line numbers, Quality of Service (QoS), Daylight Savings Time (DST) Configuration, etc.

The Web Manager is accessed from a Web browser pointed to the LIP-6812/LIP-6830 IP Address and Port Number 8000, thus the IP Phone must be assigned an IP Address prior to attempting Web Manager access. In addition, the IP Address must be available to the Web Browser host. The IP address of the LIP-6812/LIP-6830 is available through Information Display (Section 5.2).

4.1 Login & Site Map

Pointing your browser at the LIP-6812/LIP-6830 IP Address and Port 8000 will return the LIP-6812/LIP-6830 Login page, Figure 4.1-1 (ex., <http://150.150.57.44:8000>).



Figure 4.1-1 Intro Page

- 1) Click Login; the Password page will display, Figure 4.1-2.



Figure 4.1-2 Login Page

- 2) Enter a valid User Name and Password; the LIP-6812/LIP-6830 Site Map, Figure 4.1-3 will display, (default User Name is **private** and Password is **lip**).

LIP-6830 Web Manager (SIP)		Site Map	
VoIP Configuration		<u>VoIP Configuration</u>	<u>LAN Configuration</u>
LAN Configuration		SIP Configuration	Network Mode Selection (Static,DHCP) IP Address,Subnet Mask, Gateway Primary/Secondary DNS Address Domain Name
Call Preferences		<u>Call Preferences</u>	<u>Routing Table Configuration</u>
Routing Table Configuration		Block CallerID/AnonymousCall Allow Call/Msg/Hold Notification Tone Auto Answer Call Forwarding	Current Routing Table Add Entry Delete Entry
Phone Information		<u>Phone Information</u>	<u>Phone Settings</u>
Phone Settings		Version Information Phone Name Change Password	Ringer Type/Off DTMF Payload/Relay Frame Duration Headset Auto Mode
Phone Book		<u>Phone Book</u>	<u>Programmable Key</u>
Programmable Key		Current Phone Book List Add/Delete/Modify Phone Book Entry Upload/Download Phone Book List	Current Programmable Key Setting Add/Delete/Modify Programmable Key Setting DSS Console Registration
Call Log		<u>Call Log</u>	<u>Network Time Configuration</u>
Network Time Configuration		Missed/Incoming/Outgoing call Log	SNTP Server Address TimeZone DST(Daylight Saving Time) Selection
Upgrade Configuration		<u>Upgrade Configuration</u>	<u>QoS Configuration</u>
QoS Configuration		TFTP Update Result TFTP Server Address Configure S/W & Config. file download flag	Diffserv Configuration IEEE 802.1Q
Load Default Configuration		<u>Load Default Configuration</u>	<u>Reboot</u>
Reboot		Load Defaultvalue(Factory setting)	Reboot



Figure 4.1-3 Site Map

NOTE: On the left is the Web Manager page link window and in the main screen is a more detailed site map.

3) Select the desired parameters from either the Site Map or Page Link window.

4.2 VoIP Configuration

**LIP-6812
Web Manager
(SIP)**

VoIP Configuration

LAN Configuration

Call Preferences

Dial Plan

Phone Information

Phone Settings

Phone Book

Programmable Key

Call Log

Network Time Configuration

Upgrade Configuration

QoS Configuration

Load Default Configuration

Reboot



VoIP Configuration

Line 1		Proxy Address		Line 2
	5060	Proxy Port	5060	
		Display Name		
		Name		
		Authentication Name		
		Authentication Password		
	Private ▼	Line Type	Private ▼	
		Extension for DSS		
NOK		Registration Status	NOK	

Outbound Proxy Address	
Outbound Proxy Port	5060
Backup Proxy Address	
Backup Proxy Port	5060
Domain	
VMS Address	
Proxy Registration	enable ▼
Registration Timer (sec)	3600
Local UDP Port	5060
Start Rtp Port	23000
Codec Priority	G729 ▼ G723 ▼ PCMU ▼ PCMA ▼
Centralized Conference	enable ▼ URL
Broadsoft BLF	disable ▼ URL

[Return to the Site Map](#)

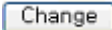
Figure 4.2-1 VoIP Configuration

Within VoIP Configuration, the adjustable parameters are:

- **Line based parameters**
 - o Proxy Server Address – IP address or FQDN of the IP Phone telephony host server.
 - o Proxy Port – Where the server listens for incoming requests and sends outgoing responses
 - o Display Name – Specifies a name to be used as part of the phone caller ID. The Display Name assigned for Line1 will be displayed on the LCD display.
 - o Name – Specifies the name to be used during registration; the name is generally the extension telephone number, or the SIP User ID.
 - o Authentication Name – Specifies the user ID for authentication of the phone.

- o Authentication Password – Specifies the user Password for authentication of the phone.
 - o Line Type – Select a line type of Private, Shared, or DSS Line.
 - o Extension for DSS – Specifies the extension number when the Line type is DSS; do not enter an Extension number unless the Line type is DSS.
- **General Parameters**
- o Outbound Proxy Address – IP address or FQDN of outbound proxy server to use in place of the Line-based Proxy Server to receive SIP requests.
 - o Outbound Proxy Port – Port of the outbound proxy server, used in place of the Line based Proxy settings
 - o Backup Proxy Address – IP address or FQDN of the backup proxy server, used when the connection with the primary proxy times-out.
 - o Backup Proxy Port – Port of the backup proxy server
 - o Domain – Specifies the Domain for SIP Service when the service provider desires to use a specific SIP domain.
 - o VMS Address – Specifies the address (IP or Phone) of the Voice Mail Server.
 - o Proxy Registration – Enable SIP registration to the proxy; this parameter is ignored if a SIP proxy server is not specified.
 - o Registration Timer – SIP registration interval (seconds) between each registration renewal to the SIP proxy server.
 - o Local UDP Port – Specifies the UDP port used for sending and receiving.
 - o Start RTP Port – Specifies the port to use for Real-time protocol (voice) packets.
 - o Codec – Sets the priority for audio codecs.
 - o Centralized Conference - Enables or disables Centralized Conference audio processing conferences. When enabled, the Server is expected to provide a single RTP stream for the conference. When disabled, the separate RTP streams are provided for each participant and the Phone must process the the RTP streams. Also, sets the URL for the central conference server.
 - o Broadsoft BLF – When enabled, all DSS Line types will register to and receive BLF (Busy Lamp Field) indication from the defined URL.

To modify a parameter:

- 1) Select the parameter, and modify the value.
- 2) Select the  button.



Changing the proxy server address, proxy port by line and outbound proxy, backup proxy, VMS address or local UDP port requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

4.3 LAN Configuration

LIP-6812 Web Manager (SIP)

VoIP Configuration

LAN Configuration

Call Preferences

Dial Plan

Phone Information

Phone Settings

Phone Book

Programmable Key

Call Log

Network Time Configuration

Upgrade Configuration

QoS Configuration

Load Default Configuration

Reboot

LAN Configuration

Network Selection	☐ Static ☒ DHCP
IP Address	150.150.141.18
Subnet Mask	255.255.255.0
Default Gateway	150.150.141.8
Mac Address	00:40:5A:13:E0:0C
Primary DNS	0.0.0.0
Secondary DNS	0.0.0.0
Domain Name	
CDP	enable

Change

[Return to the Site Map](#)

LG-NORTEL

Figure 4.3-1 LAN Configuration

In the LAN Configuration screen the adjustable parameters are:

- **LAN Configuration**
 - o Network Selection – IP Address mode for the LIP-6812/LIP-6830, radio button selects Static or DHCP address
 - o IP address – LIP Phone IP address
 - o Subnet Mask – LIP Phone subnet mask
 - o Default Gateway – LIP Phone default gateway IP address
 - o Mac Address – MAC address of the LIP Phone (view only)
 - o Primary DNS – IP address of DNS server
 - o Secondary DNS – IP address of auxiliary DNS server
 - o Domain Name – Domain Name for the LIP Phone
 - o CDP – Discovery protocol for VLAN ID.

To modify the Network Selection (IP address mode):

- 1) Select the radio button for Static or DHCP address assignment.
- 2) When complete, select the **Change** button to load new values to the LIP Phone memory.

To modify any of the addressing information

- 1) Select the parameter to be changed and enter the new value (Static mode only).
- 2) When complete, select the  button to load new values to the LIP Phone memory.



The MAC address can be viewed only and not modified.

Changing any value in the LAN Configuration screen requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

4.4 Call Preferences

**LIP-6812
Web Manager
(SIP)**

- VoIP Configuration
- LAN Configuration
- Call Preferences**
- Dial Plan
- Phone Information
- Phone Settings
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- Programmable Key
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- Network Time Configuration
- Upgrade Configuration
- QoS Configuration
- Load Default Configuration
- Reboot

Call Preferences

Caller ID Blocking	disable ▼
Anonymous Call Block	disable ▼
Call Waiting Function	enable ▼
Call Waiting Tone	enable ▼
Call Hold Ringback	enable ▼
Message Waiting Tone	enable ▼
Auto Answer	disable ▼

Call Forwarding

Condition	not use ▼
Address to Forward	
No-answer Time (sec)	10

Direct Call

Direct Call	disable ▼
Direct Call Number	
Direct Call Timer (0 ~ 10 sec)	5 ▼

Change

Return to the Site Map

Figure 4.4-1 Call Preferences

LIP-6812/LIP-6830 supports various User Call preferences from outgoing Caller ID blocking to Anonymous Call Block to prevent unwanted incoming calls.

On the Call Preferences screen the adjustable parameters are:

- **Call Preferences**
 - o Caller ID Blocking – Caller ID name can be blocked for outgoing calls. Anonymous is employed as the name when Caller Id is blocked.
 - o Anonymous Call Block – The Phone can block incoming calls with an Anonymous Caller Id.
 - o Call Waiting Function – When the phone is in use, a new call is refused (if disabled).
 - o Call Waiting Tone – When the Phone is in use, a new call can signal the user with a Call Wait tone, if enabled.
 - o Call Hold Ringback – When a user has a call on hold and returns to idle, the Phone can notify the user of the holding call with a ring tone (if enabled).

- o Message Waiting Tone – The user can receive an audible signal, “stutter” dial tone, as notification of a message waiting; stutter dial tone notification is in addition to the visual flashing LED notification.
- o Auto Answer – The Phone can be configured to automatically answer an intercom call by activating the speakerphone or headset connection.
- **Call Forwarding**
 - o Conditions – Defines the condition for Call Forward, Busy, No-Answer, Busy & No-Answer or unconditional, or not used.
 - o Address to Forward - Defines the address to receive forwarded calls.
 - o No-Answer Time – When No-answer forward is selected, defines the time period before calls are forwarded.
- **Direct Call (Hotline/Warm-Line)**
 - o Direct Call – Enables Hotline/Warm-Line operation; when the user goes off-hook, a call is placed to a defined location.
 - o Direct Call Number - When Direct Call is assigned that when the user goes off-hook, a call is placed to the defined number.
 - o Direct Call Timer – For Warm-Line operation, the timer specifies the period before the Direct Call is placed. Set in 1 second increments (0-10 seconds); Hotline operation is 0 seconds.

To modify parameters on the Call Preferences Configuration screen:

- 1) Select the desired parameter and enter new values, or select values from the drop-down menus.
- 2) When complete, select the  button to load new values to the LIP Phone memory.

4.5 Dial Plan

The LIP phone incorporates a Dial Plan, which monitors the user dialed digits for patterns matching the Dial Plan number. If a matching pattern is dialed, the phone will modify the digits and process the call using the modified digit string. The Dial Plan is defined as either a Routing Table or a Digit Map.

4.5.1 Routing Table

LIP-6812 Web Manager (SIP)

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LAN Configuration
Call Preferences
Dial Plan
Phone Information
Phone Settings
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Call Log
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QoS Configuration
Load Default Configuration
Reboot

Dial Plan Type

☐ Digit Map ☒ Routing Table

[Change](#)

Current Routing Table

Index	Number	TRNC	Pre	Post	Extra
0	~	0	NULL	NULL	0.0.0.0

[Delete Entry](#)

Add Entry

Number	TRNC	Pre	Post	Pause	Extra
	0	NULL	NULL	NULL	0.0.0.0

[Add Entry](#)

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LG-NORTEL

Figure 4.5-1 Routing Tables Configuration

In the Routing Table up to 50 Dial Plan numbers may be defined. Each pattern can include definitions for modifying the dialed number. Specific entries for the Routing Table are:

- Number – digit pattern to match with the user dialed digits.
- TRNC – Truncation, defines the number of digits to delete from the dialed number.
- Pre – defines digits to insert in the front of the truncated number.
- Post – defines the digits to insert at the end of the truncated number.
- Pause – defines the position in the Number where, if matched, the phone will Pause for additional digits before processing the call. The pause duration is programmable with a default of 3 seconds under the [Dial] section of the Configuration file.
- Extra – IP Address of phone to assign the prefix number.

In addition to the dial pad digits, special characters can be defined as follows:

- ? – matches any single digit.

- ~ – matches a string of characters of any length.
- , – locates the position of a Pause.
- . – returns dial tone”

The following are examples of Dial Plans using the Routing Table.

Simple Dial Plan using the Routing Table

Process the call after any 7 digit number is dialed or if the Operator is dialed at digit '0'.

Number	TRNC	Pre	Post	Pause	Extra
0??????	0	NULL	NULL	?,	0.0.0.0
???????	0	NULL	NULL	NULL	0.0.0.0

From this table, if the user dials '0' as the first digit, the LIP phone will wait for the pause time for additional digits. After the pause, if no additional digits are dialed, the phone places a call to the Operator. In addition, after the user dials any seven digits, the call is processed.

Complex Dial Plan

Process the call after the local operator at 0, long distance operator at 00, a four-digit local extension number starting with 3,4 or 5, a seven-digit local number prefixed by an 8, two-digit number preceded by star (*), a ten digit long distance number prefixed by 91, or an international number starting with 9011 is dialed.

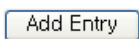
Number	TRNC	Pre	Post	Pause	Extra
0?	0	NULL	NULL	?,	0.0.0.0
00	0	NULL	NULL	NULL	0.0.0.0
3???	0	NULL	NULL	NULL	0.0.0.0
4???	0	NULL	NULL	NULL	0.0.0.0
5???	0	NULL	NULL	NULL	0.0.0.0
8???????	0	NULL	NULL	NULL	0.0.0.0
*??	0	NULL	NULL	NULL	0.0.0.0
91????????	0	NULL	NULL	NULL	0.0.0.0
0 9011~	0	NULL	NULL	NULL	0.0.0.0

2nd Dial Tone

To provide second dial tone after a '9' is dialed, establish a Dial Plan as below.

Number	TRNC	Pre	Post	Pause	Extra
9.~	0	NULL	NULL	?,	0.0.0.0

To change Routing Table parameters:

- 1) Assure the Routing Table radial button is selected under the Dial Plan Type
- 2) Enter the desired values into the respective boxes.
- 3) Select the  button.

To delete an entry from routing table:

- 1) Enter the entry's index.

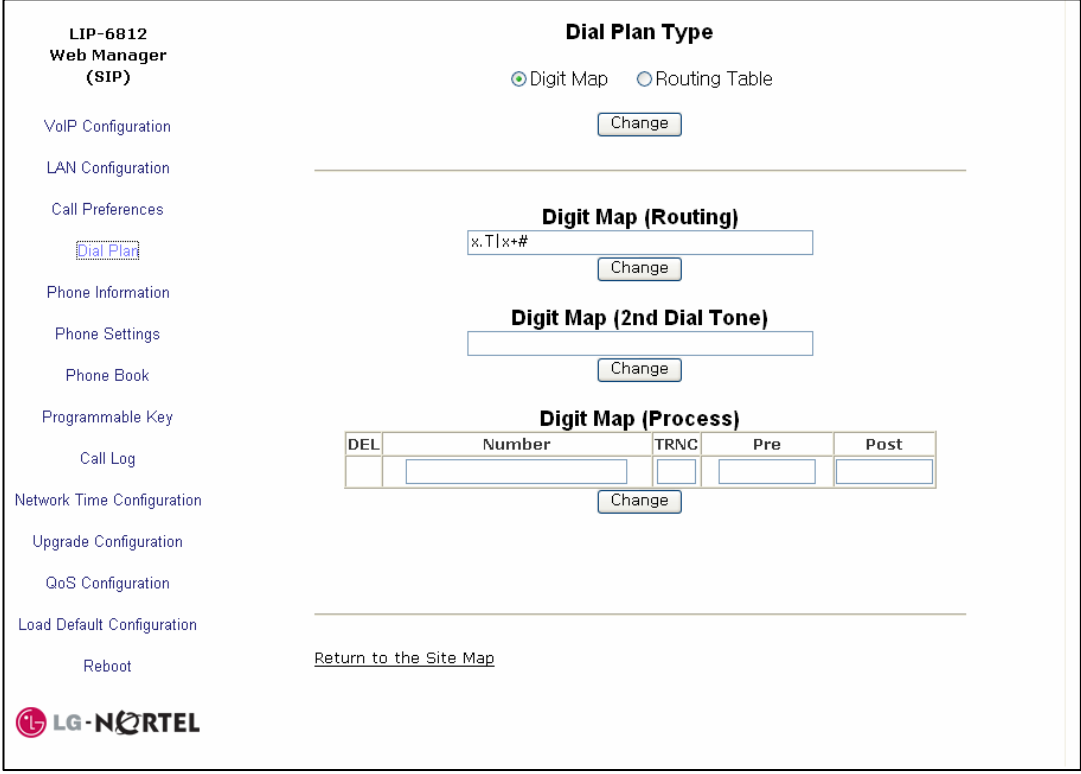
2) Click the  button.

To delete all the entries:

1) Enter 'all' as the index.

2) Click the  button.

4.5.2 Digit Map Table



LIP-6812 Web Manager (SIP)

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Call Preferences
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Reboot

Dial Plan Type
☒ Digit Map ☐ Routing Table


Digit Map (Routing)



Digit Map (2nd Dial Tone)



Digit Map (Process)

DEL	Number	TRNC	Pre	Post



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Figure 4.5-2 Digit Map Tables Configuration

Using the Digit Map Table, a string of 512 characters may be entered to define the Dial Plan. Within the string individual numbers are entered, separated by a '|'. In addition to dial pad digits, special characters may be entered as follows:

- x – matches any single digit, (0 to 9).
- T – matches a timer expiry, inserts a Timed Pause.
- . – matches any number of occurrences of a digit, including zero occurrences and includes special character matches.
- + – matches any number of occurrences of the previous match, including special characters.
- [] – matches a digit from a group of digits. Use with "." to define a range, [2-6] matches a digit 2 to 6 inclusive.

A matching number can be assigned to be modified prior to call set-up. The Digit Map Number Process defines the modification procedures including:

- TRNC – Truncation, defines the number of digits to delete from the dialed number.
- Pre – defines digits to insert in the front of the truncated number.
- Post – defines the digits to insert at the end of the truncated number.

The following are examples of Dial Plans using the Routing Table.

Simple Dial Plan using the Digit Map Table

Process the call after any 7 digit number is dialed or if the Operator is dialed at digit '0'.

The digit map for this Dial Plan is (OT|xxxxxxx). From the map, if the user dials 0 as the first digit, the LIP phone will wait for the pause time for additional digits. After the pause, if no additional digits are dialed, the phone places a call to the Operator is called. Also, after the user dials any seven digits, the call is processed.

Complex Dial Plan

Process the call after the local operator at 0, long distance operator at 00, a four-digit local extension number starting with 3,4 or 5, a seven-digit local number prefixed by an 8, two-digit number preceded by star (*), a ten digit long distance number prefixed by 91, or an international number starting with 9011 is dialed.

The dial plan for this is (OT|00T|[[3-5]xxx|8xxxxxxx|*xx|91xxxxxxxxxx|9011x.T).

A second 512 character string Map is employed employed to provide 2nd Dial Tone.

To change Digit Map Table parameters:

- 1) Assure the Digit Map radial button is selected under the Dial Plan Type
- 2) Enter the desired values into the Digit Map respective boxes.
- 3) Select the  button.

To set-up or change a Digit Map to provide second dial-tone

- 1) Enter the digits in the appropriate test boxes.
- 2) Click the  button.

To modify a Digit Map Process:

- 1) Enter the digits in the appropriate test boxes.
- 2) Click the  button.

To delete the entries from the Digit Map Process:

- 1) Select the DEL check-box.
- 2) Enter the number.
- 3) Click the  button.

4.6 Phone Information

**LIP-6812
Web Manager
(SIP)**

VoIP Configuration

LAN Configuration

Call Preferences

Dial Plan

Phone Information
 information: 정보
Phone Settings

Phone Book

Programmable Key

Call Log

Network Time Configuration

Upgrade Configuration

QoS Configuration

Load Default Configuration

Reboot

Version

Model Name	LIP-6812D (SIP IP Phone)
H/W Version	2.0
S/W Version	1.2.19s
S/W Link Time	Mar 30 2007, 16:27:57

Phone Name

Phone Name	
------------	----------------------

Change

Change Password

Login Name	private
Old Password	
New Password	
Confirm Password	

Change

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Figure 4.6-1 Phone Information

The Phone Information screen displays the version information of the LIP-6812/LIP-6830 and the Phone Name. In addition, the password can be changed from this screen.

To change the Phone Name:

- 1) Enter the desired name.
- 2) When complete, select the  button to load new values to the LIP Phone memory.

To change the Password:

- 1) Enter the existing password.
- 2) Enter the new password and confirm.
- 3) When complete, select the  button to load new values to the LIP Phone memory.

4.7 Phone Settings

**LIP-6812
Web Manager
(SIP)**

- VoIP Configuration
- LAN Configuration
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- Dial Plan
- Phone Information
- Phone Settings**
- Phone Book
- Programmable Key
- Call Log
- Network Time Configuration
- Upgrade Configuration
- QoS Configuration
- Load Default Configuration
- Reboot

Phone Settings

Ringer Type	1
Frame Duration (10~100)	20 ms
Headset Auto Mode	disable
Ringer	on
DTMF Relay	nego
DTMF Payload (96~255)	101
DTMF Duration (50~300)	120 ms
The Number of Lines (1~11)	2
Lock Outgoing Call	unlock
Use Speed Number	use

Functions

☐ Private Hold
 ☐ Barge-In

Change

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Figure 4.7-1 Phone Settings

In the Phone Settings screen, the following parameters may be modified.

- **Phone Settings**
 - o Ringer Type – Ring tone for incoming calls, select one of seven.
 - o Frame Duration – RTP frame duration (milliseconds).
 - o Headset Auto Mode – Headset connection.
 - o Ringer – Ringer on or off.
 - o DTMF Relay – DTMF signaling method (in-band, out-of-band or negotiate).
 - o DTMF Payload – RFC 2833 payload type for DTMF signals.
 - o DTMF Duration – Duration of DTMF signals sent from the phone.
 - o The Number of Lines – The number of programmable buttons used for SIP call appearances or 'Lines (min. 2); the maximum number of Lines is the maximum number of buttons available on the LIP Phone (LIP-6812=11, LIP-6830=24).
 - o Lock Outgoing Call – Locking an outgoing call, user must enter the LCD Menu password to place calls.
 - o Use Speed Number – Speed Numbers use 2-digit dialing from idle to access Phone Book numbers.
- **Functions**
 - o Private Hold – Softkey display for Private Hold function.

- o Barge-In – Softkey display for Barge-in function.

To modify Phone Setting parameters:

- 1) Select the parameter.
- 2) Enter the new value or select a value from drop-down menu.
- 3) When complete select  button.



Changing DTMF Payload, Frame Duration or DTMF Relay requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

4.8 Phone Book

LIP-6812 Web Manager (SIP)

VoIP Configuration
 LAN Configuration
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Phone Book
 Programmable Key
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 Network Time Configuration
 Upgrade Configuration
 QoS Configuration
 Load Default Configuration
 Reboot

Phone Book List

Speed Number	Name	Address	Information	Clear	Modify	Dial
Add Clear ClearAll Download Browse... Upload						

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Figure 4.8-1 Phone Book

The LIP Phone includes a Phone Book with 100 records. Each record can be accessed with a Speed Number (00-99). The Speed Dial numbers are maintained in the Phone Book. The Phone Book entries can be added, edited or deleted from the Phone Book screen.

To add a Phone Book entry:

- 1) Click the button and enter the new values in the Phone Book Entry screen.

Add a Phone Book Entry

Speed number	0 (0 ~ 99)
Name	
Address	
Info (optional)	

Save

Figure 4.8-2 Add a Phone Book Entry

2) When complete, select the button to store the new number to the Phone Book.

To modify an entry:

1) Select Modify in the desired entry and enter the new values in the Phone Book Entry screen.

2) When complete, select to store the new number in the Phone Book.

To place a call using the Phone Book:

1) Click the button for the desired entry.

To delete specific entries from the Phone Book:

1) Click the 'Clear' box in the desired entries and select the button.

To delete all entries from Phone Book:

1) Select the button.

The Phone Book can be downloaded or uploaded to/from a *.csv formatted file. To Upload/download:

1) Click and locate the desired csv file.

2) Select upload or download, as desired.

Ex..

Phone Book

Speed Number	Name	PhoneNumber	Information
1	Lee Myunghee	1000	lmh@abc.com
2	baragirl	2000	
3	lmh	3000	korea

sample *.csv file*SpeedNumber,Name,PhoneNumber,Information**1, Lee Myunghee, 1000, lmh@abc.com**2, baragirl, 2000,**3, lmh, 3000, korea*

4.9 Flexible Button

**LIP-6812
Web Manager
(SIP)**

VoIP Configuration

LAN Configuration

Call Preferences

Dial Plan

Phone Information

Phone Settings

Phone Book

Programmable Key

Call Log

Network Time Configuration

Upgrade Configuration

QoS Configuration

Load Default Configuration

Reboot

DSS Registration
DSS Mac Address

Assign a Programmable Key

F1	[private LINE]	None		F7
F2	[private LINE]	None		F8
F3	None		None	F9
F4	None		None	F10
F5	None		None	F11
F6	None		Headset	F12

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Figure 4.9-1 LIP-6830 Flexible Button

The LIP-6812 has 12 flexible buttons with one assigned for Headset, and the LIP-6830 has 24 flexible buttons. Unused buttons (not used for Lines) can be assigned to various functions (refer to Table 3-1 Flexible Button Functions for available functions).

To change button functions:

- 1) Select the function from the drop-down menu next to button.
 - For Speed Dial function, enter the number to be dialed.
 - For a Message button, enter the address or phone number of the Voice Mail Server.
- 2) If a function is changed, click the button.

To delete the function for all flexible buttons:

- 1) Select the button.

4.9.1 DSS Console

A 48-button DSS Console (side-car) may be equipped with an LIP-6812/LIP-6830 to provide additional flexible buttons for special needs. Once the DSS Console is registered, the additional buttons can be assigned.

To register a Console with a Phone:

- 1) Enter the Ethernet MAC address of the DSS Console in the “DSS Registration” box.
- 2) Select the  button.



Changing the DSS Registration requires a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

4.10 Call Log

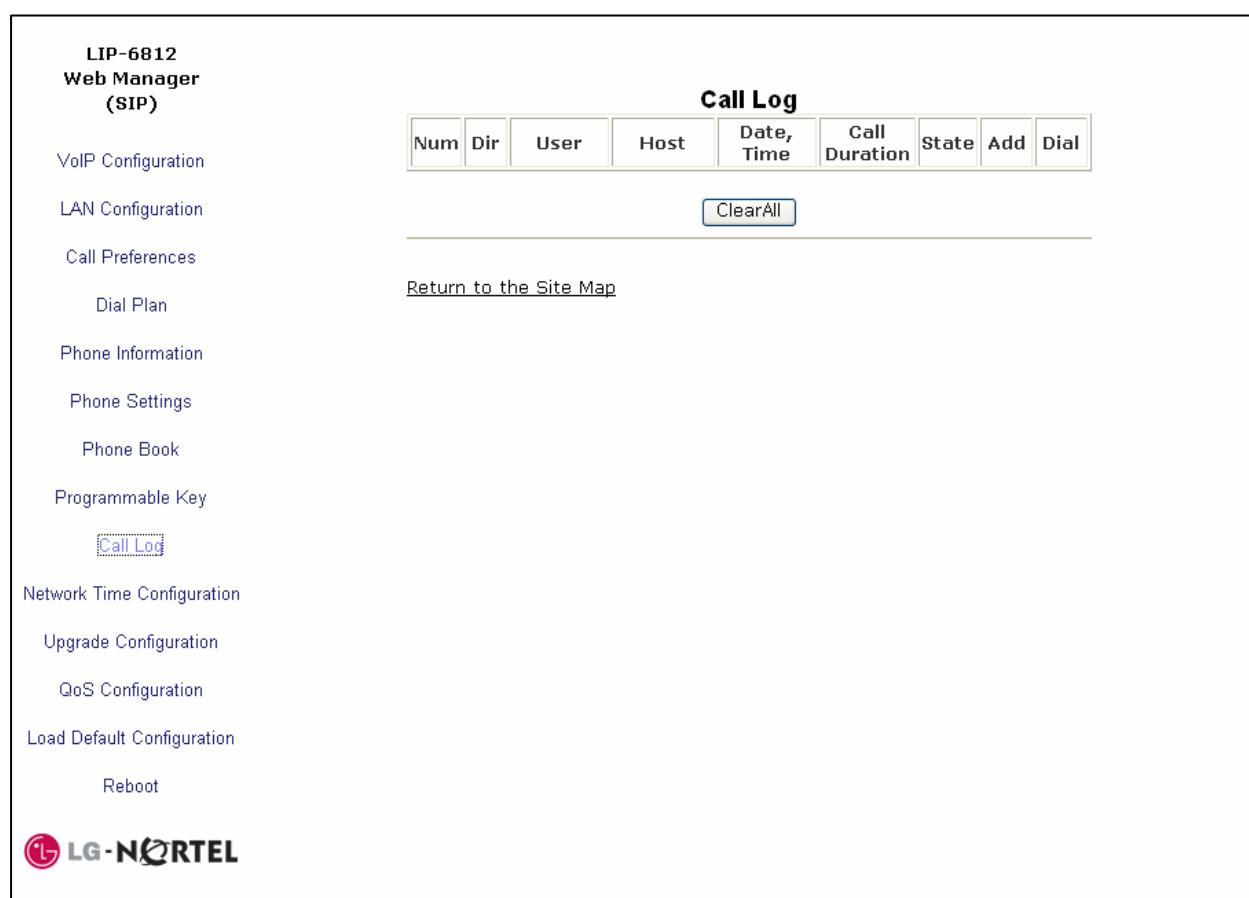


Figure 4.10-1 Call Log

The Call Log is a list of all calls (incoming, outgoing or missed) at the extension. The log indicates the Call type (InComing/OutGoing/Missed), the other Party's Address, Call time, Call duration and Call state. A number from the Call Log can be dialed or added directly to the Phone Book.

To add a number from the Call Log to the Phone Book list:

- 1) Select the **Add** button.

To delete all Call logs:

- 1) Select the **ClearAll** button.

To call a party from the Call Log:

- 1) Click the **Dial** button.

4.11 Network Time Configuration

**LIP-6812
Web Manager
(SIP)**

VoIP Configuration

LAN Configuration

Call Preferences

Dial Plan

Phone Information

Phone Settings

Phone Book

Programmable Key

Call Log

Network Time Configuration

Upgrade Configuration

QoS Configuration

Load Default Configuration

Reboot



Network Time Configuration

SNTP Server Address	pool.ntp.org
Time Zone	(GMT-08:00) PACIFIC STANDARD
DST Usage	on

Time Format

☐ Off
☐ 12H (11:35 pm)
☒ 24H (23:35)

Date Format

☐ Off
☐ MM/DD (02/05)
☐ DD/MM (05/02)

☒ DD Mon (05 Feb)
☐ Mon DD (Feb 05)

DST Configuration

Format	☐	☒
DST Start Condition	Month: MAR	Month: MAR
	Day: 1	Week of Month: 2
	Time: 2	Day of Week: SUN
DST End Condition	Month: NOV	Month: NOV
	Day: 1	Week of Month: 1
	Time: 2	Day of Week: SUN

※ Dst Configuration Example

TimeZone	PACIFIC STANDARD
Dst	Start/End Month : MAR/NOV
	Start/End Week of Month : 2/1
	Start/End Day of Week : SUN/SUN
	Start/End Time : 2/2

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Figure 4.11-1 Network Time Configuration

The Network Time Configuration screen allows you to set up the Time and Daylight Savings Time Configuration. Within Network Time Configuration, the following parameters can be set.

- **Network Time Configuration**
 - o SNTP Server Address – Simple Network Time Protocol Server IP address or URL,
 - o Time Zone – Time zone
 - o DST Usage – Enables Daylight Savings Time.
- **Time Format** – Sets the format of the LCD time display, Off, 12- or 24-hour.

- **Date Format** – Sets the format of the LCD date display.
- **DST Configuration** - The DST Configuration configures the format for Daylight Savings Time. The Start and End for DST can be configured in the Month/Day/Time format or the North American Standard, Month/Week/Day/Time format.

It is recommended that the following SNTP servers be used:

- pool.ntp.org
- ntp.nasa.gov
- clock.via.net
- tick.ucla.edu

To modify parameters on the Network Time Configuration screen, select the desired parameter and enter new values or select values from the drop-down menus. When modifications have been completed, select  to load new values in the LIP Phone memory.

4.12 Upgrade Configuration

LIP-6812
Web Manager
(SIP)

VoIP Configuration

LAN Configuration

Call Preferences

Dial Plan

Phone Information

Phone Settings

Phone Book

Programmable Key

Call Log

Network Time Configuration

Upgrade Configuration

QoS Configuration

Load Default Configuration

Reboot

LG-NORTEL

Upgrade Result

S/W Image	NULL SERVER ADDR
Sys Config.	NO SERVER ADDR
Mac Config.	NO SERVER ADDR

Upgrade Configuration

TFTP ☒	TFTP Server Address	0.0.0.0 ☒ Received by DHCP on boot
HTTP/HTTPS ☒	HTTP/HTTPS URL	 ☒ Received by DHCP on boot, Option 160
	HTTP/HTTPS Port	443
	ID	
	Password	
	MAC Cfg. Format	\$MAC ('\$MAC':MAC (ex)001234567890)
	Verifying Cert.	☒ Verified Cert. ☒ Server name verification ☒ Expiration
Root CA 		

File to Upgrade	☒ S/W ☒ Configuration
Decryption Key	
Smart Upgrade	☒ Use Smart Upgrade ☐ Every 1 hour(s) ☒ Every 0 o'clock ☒ When found new, confirm downloading.

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Figure 4.12-1 Upgrade Configuration

In the Upgrade Configuration screen, the results of the most recent download can be viewed. Upgrade result messages are defined in *Appendix C, Download LCD Messages*. A log is provided displaying any error conditions for the Configuration file download. In addition, the following parameters can be modified:

- Upgrade Configuration

- o TFTP/HTTPS – The type of upgrade file-transport method.
- o TFTP Server Address – IP address or FQDN of TFTP server for location of upgrade files. When the checkbox “Received by DHCP on boot” is checked, the LIP-6812/LIP-6830 will only use the IP address of TFTP server retrieved from the DHCP server.
- o HTTPS URL – URL of HTTP/HTTPS server for location of upgrade files. When the checkbox “Received by DHCP on boot” is checked, the LIP-6812/LIP-6830 uses the DHCP Option defined to retrieve the URL. If present, the provisioning type is changed to HTTPS using the URL from the DHCP Option, default 160.
- o HTTPS Port – Port of HTTP/HTTPS server. Commonly used number is 443.
- o ID – User Name for HTTP/HTTPS authentication.
- o Password – Password for HTTP/HTTPS authentication
- o MAC Cfg. Format – The format of the MAC specific configuration filename; “\$MAC” is replaced with the MAC address of the LIP Phone. Note this field must contain \$MAC as part of the file name or path.
- o Verifying Cert. – Defines parameters for verifying the HTTPS SSL Server Certification is valid. When “Verified Cert.” is checked, the phone checks the certification authority. When “Server name verification” is checked, the phone checks whether the server name is valid; when “Expiration” is checked, the phone checks whether the certification is expired.
- o Root CA, when the CA is verified the phone will use internal CAs including Verisign. When the CA is not available in the Phone memory, the CA can be pasted to the web page.

- o File to Upgrade – Files (S/W and Configuration) to check for download.
- o Decryption Key – 32-Byte hexadecimal key used for 3DES decryption of Configuration files.
- o Smart Upgrade – Smart Upgrade periodically checks for new software on the provisioning server. Two methods of Smart Upgrade are available; one checks the server at the interval in hours, the second checks daily at the time specified in a 24-hour clock format. Check the “Use Smart Upgrade” box, select the method with the radial button and enter the interval or time as appropriate.

When a new version is found, the LIP Phone can download the firmware automatically or will display the availability of a new version and await User confirmation to download. To await User confirmation, check the “when new found, confirm downloading” box. After download, the LIP Phone will reboot.

To modify the Upgrade configuration:

- 1) Select the parameter and enter the new value or select the check box.
- 2) When finished, select the  button.



If the checkbox “Received by DHCP on boot” is checked, then any address entered into the TFTP Server Address will be ignored and only the TFTP server address retrieved

from the DHCP Server is used.

The radial button next to the transport type (TFTP or HTTPS) desired must be checked. If the radial buttons indicate no transport type, Software and Configuration file download is disabled.

Changes made to the Upgrade Configuration require a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice.

4.13 QoS Configuration

**LIP-6812
Web Manager
(SIP)**

Diffserv Configuration

Choose one of these codepoint and enter the value in hexa code.
At VoIP system, the AF codepoint(0x28 ~ 0x98) may be recommended!

Recommended Codepoint for Standard Per-Hop Behavior

1. DE (Default Expected) : 0x00
2. EF (Expected Forwarding) : 0xb8
3. AF (Assured Forwarding) : 0x28 ~ 0x98

Grade	Ave	Bronze	Silver	Gold
Low	0x28	0x48	0x68	0x88
Medium	0x30	0x50	0x70	0x90
High	0x38	0x58	0x78	0x98

ToS

IEEE 802.1Q

	PC Port	LAN Port
Priority	3	5
Vlan ID (0 ~ 4094)	0	0

Jitter Buffer Configuration

Minimum Delay (0 ~ 150)	30 ms
Normal Delay (0 ~ 150)	60 ms
Maximum Delay (0 ~ 150)	120 ms

[Return to the Site Map](#)

Figure 4.13-1 QoS Configuration

On the QoS Configuration screen, the DiffServ Code Point (DSCP) and VLAN parameters are defined. DSCP establishes the priority of the packet. Compatible routers apply the DSCP for packet priority, handling higher priority packets first. However, at congested routers, higher priority packets are discarded first. Thus, a median value for the DSCP is recommended.

The VLAN tag provides the definition for Ethernet frame priority and VLAN ID based on IEEE 802.1p/Q. The VLAN tag is assigned separately for the LIP-6812/LIP-6830 PC and LAN (voice) port. When VLAN ID is assigned, only frames with the ID are accepted and frames sent by the LIP-6812/LIP-6830 include the LAN port the VLAN information. In addition, the PC, LAN switch ports and the default gateway must be assigned to employ the VLAN tags for proper operation.

Jitter Buffer Configuration is used to control QoS. The minimum, normal, and maximum delays expected can be changed. Using larger values produce less packet loss as the LIP Phone will wait longer for receipt of packets. However, large values may delay voice packet processing. Smaller values may produce more packet loss but quicker voice packet processing.

To modify the QoS configuration:

- 1) Select the parameter, and either enter a new value or select a value from the drop-down menu.
- 2) When complete, select  to load the new values in the LIP-6812/LIP-6830 memory.



Modifications made to the IEEE 802.1p/Q Configuration require a reboot of the LIP-6812/LIP-6830; when you leave the menu, you will receive a Reboot notice

4.14 Load Default

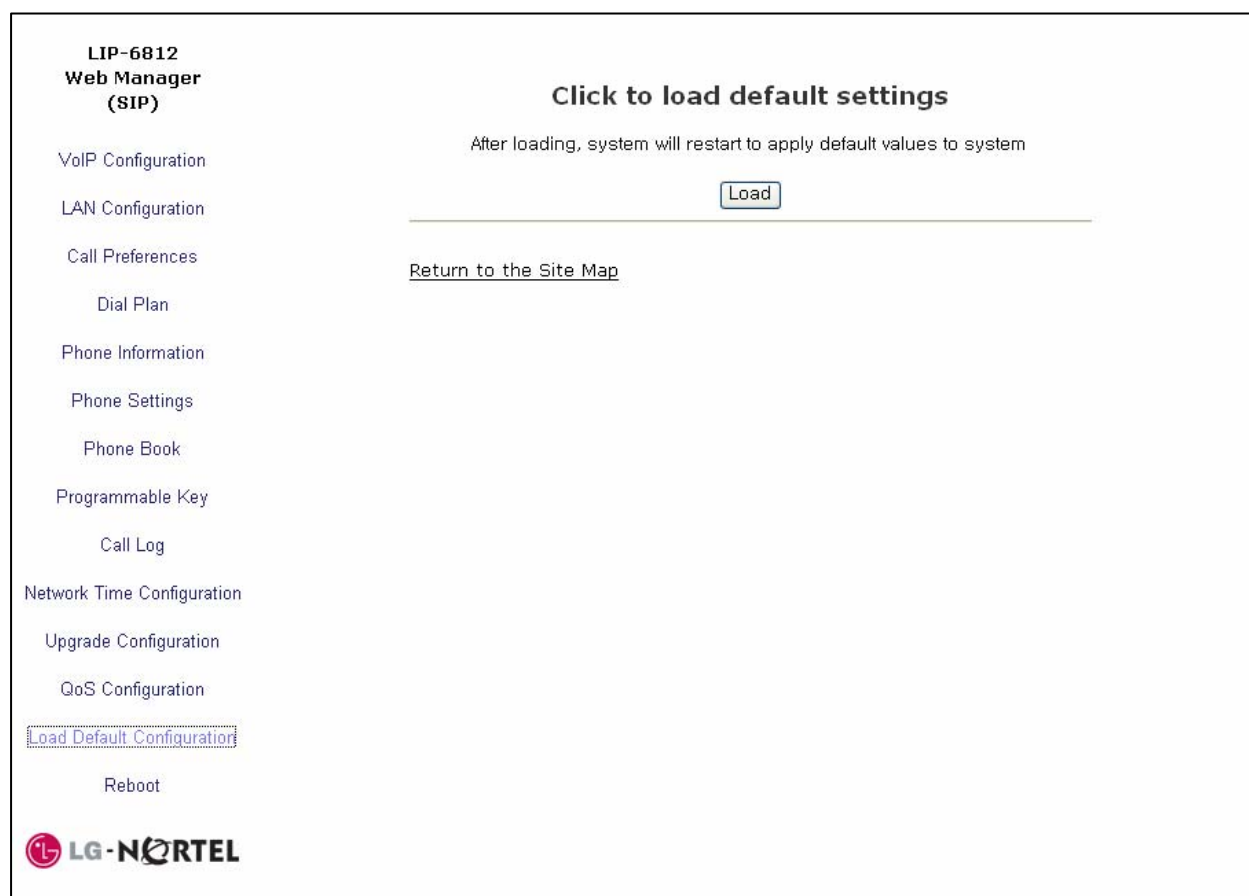


Figure 4.14-1 Load Default

The Load Default Configuration screen permits the LIP-6812/LIP-6830 Configuration to be returned to Factory Default values (refer to *Appendix A*, Factory Default Configuration).

To set the LIP-6812/LIP-6830 to default values

- 1) Select **Load** and confirm.
- 2) The IP Phone configuration will load the default configuration and reboot.

4.15 Reboot

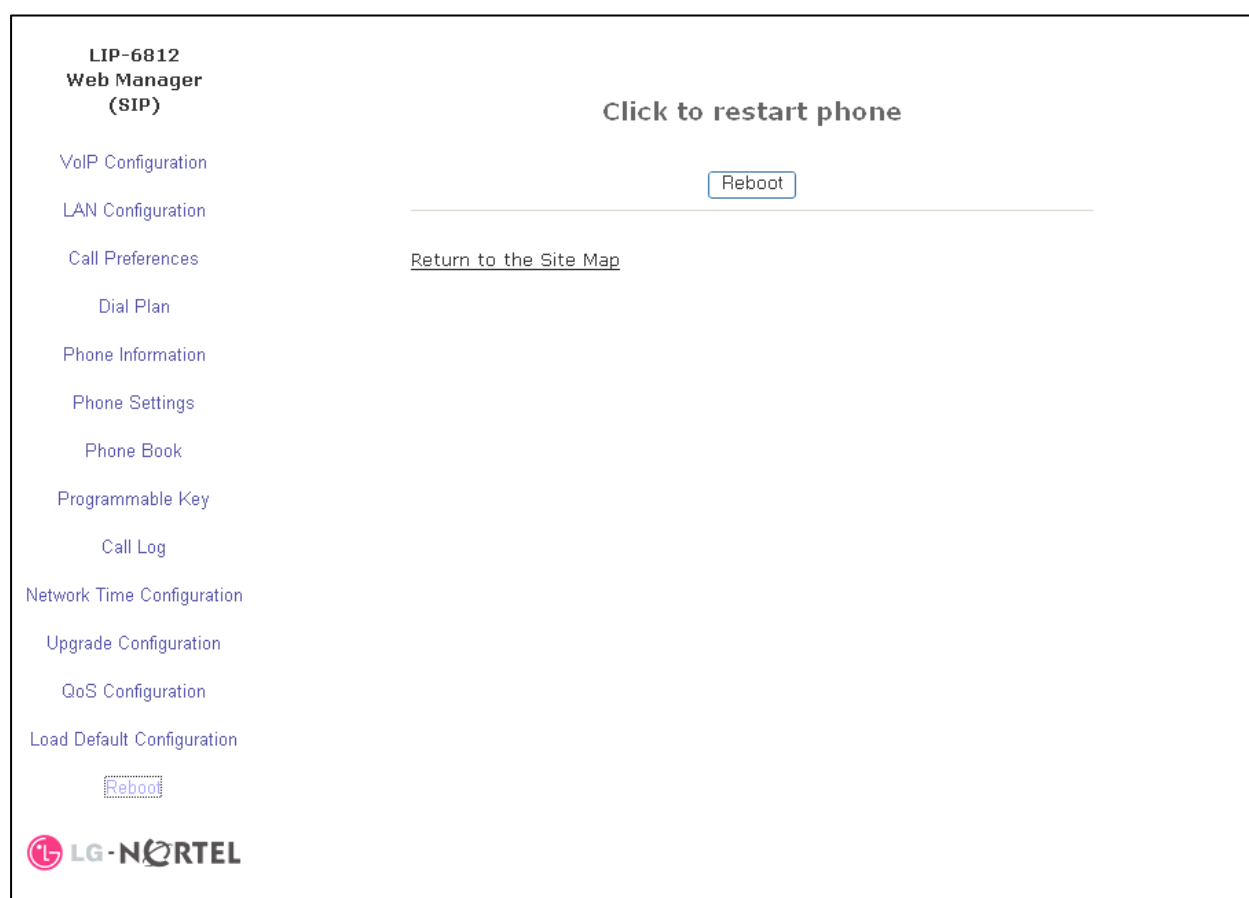


Figure 4.15-1 Reboot

The Reboot screen is used to manually reboot the LIP-6812/LIP-6830.

To reboot the LIP-6812/LIP-6830:

- 1) Select the  button.
- 2) The IP Phone will save and load any changes in the Configuration to active memory and will reboot using the changed configuration data.

5. Troubleshooting

5.1 Information

The LIP-6812 and LIP-6830 provide the means to quickly view the Network parameters (IP address, Default Gateway address, and Subnet-mask), Server IP addresses (Call Server, TFTP Server, and SNTP Server), and view recent download information for configuration and software files.

- 1) Press the  button.
- 2) Press  button, or move cursor to **8.Information** using the **[Next]/[Prev]** Softkeys, and press the **[OK]** Softkey.

IP Address: 192.168.0.20 ↑ [Prev] [Next]	SNTP Server Address: 100.200.5.1 ↑ [Prev] [Next]
Subnet Mask: 255.255.255.0 ↑ [Prev] [Next]	Download Result: S/W: IMAGE XFER ERR ↑ [Prev] [Next]
Default Gateway: 192.168.0.1 [Prev] [Next]	SYS CFG: CFG XFER ERR MAC CFG: CFG XFER ERR ↑ [Prev] [Next]
Call Server 1 Address: 100.0.0.1 ↑ [Prev] [Next]	DSS Status: DSS is NOT connected. ↑ [Prev] [Next]
Call Server 2 Address: 100.0.0.2 ↑ [Prev] [Next]	H/W version: 2.1 S/W version: 1.1.16s ↑ [Prev] [Next]
TFTP Server Address: 192.168.0.2 ↑ [Prev] [Next]	

- 3) Press the **[Next]** Softkey to view next information.

The download information display has several messages that may be displayed based on the download flags and result of the most recent download (*Appendix C* lists the messages and applicable meaning).

- 1) Press the  button to exit the menu.

5.2 Troubleshooting Guide

Symptom	Corrective Action
LCD Off	1. Switch power source ON 2. Check/replace AC/DC adapter 3. Check/correct input power
Handset off-hook, no dial tone	1. Check that the RJ-45 LAN cable is connected correctly. 2. Make sure that the Call Server IP address is correct.
Button LEDs flash red then green	Line not registered with the Call Server, 1. Check Phone configuration 2. Check network connections 3. Check call server.
Network setting error	1. Network Mode: DHCP Make sure Network Mode is DHCP. Make sure the RJ-45 LAN cable is connected securely to your LIP-6812/LIP-6830 and LAN, hub, or router. Make sure that all network ports, routers, or hubs are alive. Make sure your network supports DHCP. 2. Network Mode: Static Make sure Network Mode is Static. If you entered the IP address through a phone, make sure you reset your LIP-6812/LIP-6830.
When I attempt to make a call, I can't hear	1. Check all cables and connections. 2. Make sure that the Call Server IP address is correct.

Table 5.2-1 Troubleshooting

NOTE: If you are experiencing a technical problem, contact your System Manager.

Appendix A. Factory Default Configuration

Factory default configurations are settings for the configuration which are set at the factory. The default values for configurable settings are given in Table A below.

Config File Section Name	Parameter/Field	Default Value
[LAN]	Network Mode	DHCP
	IP Address	192.168.1.1
	Subnet Mask	255.255.255.0
	Default Gateway	192.168.1.254
	Primary DNS Address	0.0.0.0
	Secondary DNS Address	0.0.0.0
	Domain Name*	Not Assigned
	TFTP Server address	Not Assigned
	TOS (Type of Service)*	0
	PC port VLAN Priority	3
	PC Port VLAN Id	0
	LAN port VLAN Priority	5
	LAN port VLAN Id	0
[VOIP]	Call Server Address line 1	0.0.0.0
	Proxy Port line 1	5060
	Display Name line 1	Not Assigned
	Name line 1	Not Assigned
	Auth. Username line 1	Not Assigned
	Auth. Password line 1	Not Assigned
	Line 1 Line type	Private
	Extension for DSS line 1	Not assigned
	Call Server Address line 2	0.0.0.0
	Proxy Port line 2	5060
	Display Name line 2	Not Assigned
	Name line 2	Not Assigned
	Auth. Username line 2	Not Assigned
	Auth. Password line 2	Not Assigned
	Line 2 Line type	Private
	Extension for DSS line 2	Not assigned
	Outbound Proxy Address	Not Assigned
	Outbound Proxy Port	5060
	Backup Proxy Address	Not Assigned
	Backup Proxy Port	5060
	Domain*	Not assigned
	Start RTP Port	23000
	VMS Address	Not Assigned
	prack mode**	disabled
	User Name*	Not Assigned
	Replaces header**	enabled
	Local UDP Port	5060

Config File Section Name	Parameter/Field	Default Value
	Register Expires	3600 seconds
	SIP Session timer**	0
	SIP T1 timer**	500 msec.
	SIP T2 timer**	4000 msec.
	Stun Server Address**	Not Assigned
	Number of Lines*	2
	Preferred Codec*	G729/G723/PCMU/PCMA
	Central Conference	Enabled w/Call Server as URL
	Broadsoft BLF	disabled
[ROUTE]	Interface type	Not Assigned
	Port	Not Assigned
	Destination	Not Assigned
	Truncation	Not Assigned
	Prefix Number	Not Assigned
	Suffix Number	Not Assigned
	Pause	Not Assigned
	IP Address	Not Assigned
[DSP]*	Ringer Off	Ringer on
	VAD	Off
	Frame Duration*	20
	Headset Auto Mode*	Disabled
	DTMF Relay*	nego
	DTMF Payload*	101
	DTMF Duration	120 milli-sec.
	Ring Type 0 frequency**	425/440 Hz
	Ring Type 1 frequency**	530/555 Hz
	Ring Type 2 frequency**	350/375 Hz
	Ring Type 3 frequency**	1280/1300 Hz
	Ring Type 4 frequency**	490 500 Hz
	Ring Type 5 frequency**	690 700 Hz
	Ring Type 6 frequency**	1090 1100 Hz
	Undefined Cadence (0)**	2000, 4000, 0, 0, 0, 0
	External call Cadence (1)**	800, 400, 800, 4000, 0, 0
	Group call Cadence (2)**	400, 200, 400, 200, 800, 4000
	Internal call Cadence (3)**	300, 200, 1000, 200, 300, 4000
	ACD call Cadence (4)**	500, 0, 0, 0, 0, 0
	Jitter Buffer, (min, max, nom.)*	30, 60, 120 msec.
[FWRD]	Call Forward	Not Assigned
[DIAL]	Dial Mode	Number
	Dial Plan Pause timer	3 seconds
	Inter-digit timer	10 seconds
[SYSTEM]	Language**	English
	Lock Outgoing Call	unlock
	Use Speed Number	No
	Web Server**	enabled
	telnet_server*	allow

Config File Section Name	Parameter/Field	Default Value
	phone password	Not Assigned
	function private_hold*	disable
	function barge_in*	disable
	function cdp	enable
	Web Manger Login Name*	private
	Web Manager Login Password*	lip
	DSS registration	Not assigned
[NETTIME]	NTP Server Address	pool.ntp.org
	Synch. Interval**	24 hours
	Time Zone	3 (PACIFIC STANDARD)
	DST Enable	On
	DST Format*	North American standard format
	DST Start Configuration*	March, 2 nd week, Sunday at 2 am
	DST End Configuration*	Nov, 1 st week, Sunday at 2am
	Time Format	24 hour
	Date Format	DD Mon (21 Feb)
[PROVISION]	Provisioning Type	TFTP
	Use DHCP option 66/150	Enable
	HTTPS URL	Not Assigned
	HTTPS URL DHCP Option	160
	Use DHCP option	Enable
	HTTP/HTTPS Port	80/443
	ID	Not Assigned
	Password	Not Assigned
	Phone Specific File name	\$MAC
	HTTPS Certs*	Authority, server name & expiration
	Decryption key*	Not Assigned
	Smart Upgrade*	Upgrade at midnight
	S/W Download Flag	Enabled
	Config Download Flag	Enabled
[PROG]	Flex Buttons	1 & 2 Private Lines
[CALL]	Caller ID Block	Disabled
	Anonymous Caller ID Block	Disabled
	Call Waiting	Enabled
	Call Waiting Tone	Enabled
	Call Hold Ringback Tone	Enabled
	Message Waiting Tone	Enabled
	Auto Answer	Disabled
	Forwarding Condition*	0 off
	Forwarding Address*	Not Assigned
	Forwarding No Answer Time*	10 seconds
	Direct Call*	disabled
	Direct Call Number*	Not Assigned
	Direct Call Timer*	5 seconds

Table A. Factory Default Settings

NOTE: Parameters marked with an * can not be modified via the LCD Menu. Parameters mark with ** can only be modifieid using the configuration file download.

Appendix B. LIP-6812/LIP-6830 Specification

Table B provides the basic specifications of the LIP-6812/LIP-6830.

Table B. LIP-6812/LIP-6830 Specifications

Item	LIP-6812	LIP-6830
Network Interface	RJ-45 IEEE 802.3 Ethernet/Fast Ethernet switch port	
PC/Workstation Interface	RJ-45 IEEE 802.3 Ethernet/Fast Ethernet switch port	
Power	802.3af or AC/DC Power Adapter	
LED Indicators	Message Indicator, Speaker, Mute Red LED	
	11 Programmable Buttons and 1 Headset Button Red/Green LED	24 Programmable Buttons Red/Green LED
Physical Size (H x W x D)	108 x 203 x 190 mm	108 x 257 x 190 mm
Weight	880 g	1020 g
AC/DC Adaptor	Output: 48VDC, 100mA AC/DC adaptor : Input: 120 VAC, 0.1 A (max.), 60 Hz, 11 W (max.)	
Operation Temperature	0 - 40° C	
Storage Temperature	-20 - 60° C	
Operation Humidity	10 - 85 %RH (Note : non-condensing)	

Appendix C. Download LCD Messages

Table C-1 provides the messages displayed for the most recent Software download.

Table C-1 Software Download Message

Message	Description
LOAD FLAG OFF	S/W load is disabled
NULL SERVER ADDR	TFTP/WEB server address is 0.0.0.0
VER FILE XFER ERR	Downloading a new version of S/W has failed
IMAGE XFER ERR	Check the TFTP/ WEB server
VER FILE NOT FOUND	The version file doesn't exist in TFTP/ WEB server
VER STRING ERR	The version file contains an erroneous format
IMAGE NOT FOUND	The S/W image doesn't exist in TFTP/ WEB server
IMAGE SIZE ERR	The S/W image size is 0 or larger than maximum size
INVALID ID OR PW	The current ID or password for authentication is invalid
NEW VERSION LOADED	S/W is successfully loaded
UPDATE NOT NEEDED	The current version is the latest

Table C-2 provides messages displayed for the most recent Configuration file download.

Table C-2 Configuration Download Message

Message	Description
LOAD FLAG OFF	Config file load is disabled (section 3.6.8.5 or 4.12)
NO SERVER ADDR	TFTP/ WEB server address is 0.0.0.0
CFG XFER ERR	Downloading the configuration file has failed; check if the TFTP/WEB server is running
FILE SIZE ERR	The configuration file size is 0 or there is an error during reading time from TFTP server
FILE NOT FOUND	The configuration file doesn't exist in TFTP/ WEB server
INVALID FILE OR DECRYPT KEY	The received configuration file is an invalid format or encrypted with an unknown key
PARAMETER ERR	The configuration file contains an erroneous value; the value has been automatically converted to previous value
INVALID ID OR PW	The current ID or password for authentication is invalid
DOWNLOAD OK	Configuration was successfully downloaded

Appendix D. Using the Configuration File

During automated provisioning (Config. Download flag, Section 3.6.8.5 or 4.12 is enabled), LIP Phones will attempt to download a global and a Phone specific Configuration file from a TFTP or Web server supporting HTTP/S. The global files, “sysconf_6812d_sip.cfg” and “sysconf_6830d_sip.cfg”, are typically used for parameters which are the same for all LIP Phones connecting to the server. Parameters such as Network mode, Time Zone, Daylight Savings Time mode might be globally set.

The phone-specific Configuration file as a default uses the MAC address of the phone (for example, 00405a123477) for the file name. When using HTTP/S, the LIP Phone can be assigned with a name for the phone specific file in place of the MAC address but the MAC address must be included in the file name or path. Parameters specified in the phone specific configuration file override those defined in the global configuration file.

Both the global and MAC configuration files can configure any of the parameters of the Phone, the only difference is the MAC file values have priority over the global file. Each is an ASCII file containing parameters, called Fields under various Sections. By assigning values after the Field name, the LIP Phone Configuration parameters are established.

NOTE: A blank Field in the Configuration file will return the value of the associated parameter to default. Also, if a value is changed for a Field Name marked with an asterik in Table D-1, the reboot flag will be enabled and the LIP Phone will reboot after initialization is completed. The first line of the Configuration file (global or phone specific) must be “LIP-68XX configuration information SIP4B(v1.0)” as shown in Figure D.

The Configuration files can be loaded without encryption. The Phone supports HTTPS, using SSL and can be assigned a User name and password to authorize access to the HTTPS files. In addition, HTTP/HTTPS files can be encrypted using a 32-byte key, which must be assigned to the phone or passed via the Config file; the Phone will use the 3DES algorithm to decrypt the file.

In DHCP mode, the values from the DHCP Server have a higher priority than the values in the sysconf_6812d_sip.cfg/sysconf_6830d_sip.cfg file and Phone-specific configuration file.

Table D-1 below shows the Configuration parameters by Section and Field/Parameter Name with descriptive information. Table D-2 shows selections available for the time zones. Figure D provides a blank LIP-6812/LIP-6830 Configuration file. Values need only be assigned in the Configuration files if other than default (refer to the comments in the example configuraiton file for proper entry of values). If a Field is erased or commented-out, it will have no affect on the LIP Phone memory; the phone will use the existing value in memory. Deleting an unused field line from the Configuration file reduces traffic at boot.

Section	Field Name (Parameter Name)	Description
LAN	network_mode	Whether the phone uses DHCP to configure network.

		Valid values are static and dhcp. Default is dhcp. To configure manually your IP settings, you must set this parameter to static. Note: Basic provisioning parameters are requested from the local DHCP Server, as below: DHCP Option #1 :Subnet Mask DHCP Option #2 :Time offset in seconds of the local time zone from GMT. DHCP Option #3 :Default Gateway (router) IP Address DHCP Option #6 :DNS Server IP Address DHCP Option #42 :SNTP Server IP Address DHCP Option #50 :IP address of the phone DHCP Option #66 :TFTP Server Name DHCP Option #150 :TFTP Server IP Address, has priority over Option #66 when set DHCP Option #160 :HTTPS URL for provisioning, has priority over Option #66 and #150
	dns1_address	IP address of the Primary DNS server used by the phone to resolve names to IP addresses.
	dns2_address	(Optional) IP address of the Secondary DNS server used by the phone to resolve names to IP addresses. The phone attempts to use Secondary DNS servers if Primary DNS server is unavailable.
	domain_name	(Not used) Domain in which the phone resides.
	tftp_server_address	IP address or URL of a TFTP server for provisioning.
	tos	(Optional) Type of service (ToS) value for the media stream being used. Valid values are 00 to FF (Hex). Default is 0.
	pc_802_priority	(Optional) Establishes the IEEE 802.1 priority for Ethernet frames from the LIP Phone PC port. Valid values are 0 to 7. Default is 3.
	phone_802_priority	(Optional) Establishes the IEEE 802.1 priority for Ethernet frames from the LIP Phone voice port including signaling and voice packets. Valid values are 0 to 7. Default is 5.
	pc_vlan_id	(Optional) Unique identifier of the VLAN of which the pc port is a member. 1 to 4094 0 (disables VLAN) Default is 0, disable.
	phone_vlan_id	(Optional) Unique identifier of the VLAN of which the phone port is a member. Valid values are the following: 1 to 4094 0 (disables VLAN) Default is 0, disable.

NETTIME	sntp_server_address	(Optional) IP address or URL of the SNTP server from which the phone obtains time data.
	interval	(Optional) Duration (interval), in hours, between time sync with sntp server. Valid values are 0 to 120. Default is 1.
	timezone	(Optional) Time zone in which the phone is located. Valid values are region numbers representing various time zones shown in Table 2. Default is 3 (Pacific Standard).
	time_format	(Optional) Time format for LCD displaying. Valid values are 0 (off), 1 (12H) or 2 (24H). Default is 2.
	date_format	(Optional) Date format for LCD displaying. Valid values are 0(off) 1(MM/DD) 2(DD/MM) 3(DD Mon) 4(Mon DD). Default is 3.
	dst_auto_adjust	(Optional) Whether daylight savings time (DST) is automatically adjusted on the phones. Valid values are 0 (do not adjust) or 1 (adjust). Default is 1.
	dst_start_month	(Optional) Month in which DST starts. Valid values are 1 to 12, with 1 being January and 12 being December. In the United States, the default is 3.
	dst_start_day	(Optional) Day of the month on which DST begins. Valid values are the following: • 1 to 31 (for days of the month) • 0 (ignore this field and use the value in the dst_start_day_of_week parameter instead) Default is 0.
	dst_start_day_of_week	(Optional) Day of the week on which DST begins. Valid values are 1 to 7 (1 is Sunday; 7 is Saturday). In the United States, the default is 1.
	dst_start_week_of_month	(Optional) Week of month in which DST begins. Valid values are 1 to 6 and 7 (1 is the first week; each subsequent number is a subsequent week; 7 is the last week in the month regardless of which week the last week is). In the United States, the default is 2.
	dst_start_time	(Optional) Hour of day on which DST begins. Valid values are 0 to 23. In the United States, the default is 2.
	dst_stop_month	(Optional) Month in which DST ends. Valid values are 1 to 12 with 1 being January and 12 being December. In the United States, the default is 11.
	dst_stop_day	(Optional) Day of the month on which DST ends. Valid values are as follows: • 1 to 31 (for the days of the month) • 0 (ignore this field and use the value in the dst_stop_day_of_week parameter instead) Default is 0.
	dst_stop_day_of_week	(Optional) Day of the week on which DST ends. Valid values are 1 to 7, with 1 being Sunday and 7 being Saturday. In the United States, the default is 1.
	dst_stop_week_of_month	(Optional) Week of month on which DST ends

		Valid values are 1 to 6 and 7, with 1 being the first week, each number thereafter being subsequent weeks, and 7 being the last week in the month regardless of which week the last week is. In the United States, the default is 1.
	dst_stop_time	(Optional) Hour of day on which DST ends. Valid values are 0 to 23. In the United States, the default is 2.
VOIP	outbound_proxy_server	(Optional) Address of the outbound proxy server in dotted IP address or URL format. When an outbound proxy is enabled, all SIP requests are sent to the outbound proxy server instead of to the linen_proxy_address. The media stream is not routed through the outbound proxy.
	outbound_proxy_port	(Optional) Port number of the outbound proxy server. Default is 5060. Valid values are 1024 to 32000.
	backup_proxy_server	(Optional) Address of the backup proxy server. Enter this address in IP dotted-decimal notation or URL.
	back_proxy_port	(Optional) Port number of the backup proxy server. Valid values are 1024 to 32000. Default is 5060.
	message_url	(Optional) Configures the voice-mail number that is dialed when the MSG button is pressed. Value is typically a phone number but can be an IP address or a hostname.
	SIP_service_domain	(Optional) Specifies the SIP service domain.
	preferred_codec	(Optional) Codec to use when a call is initiated. Valid values are g729, g723, pcmu and pcma. Default order of priority is g729 g723 pcmu pcma.
	rtp_port	(Optional) Start RTP range for media. Range is from 16300 to 32700. Default is 23000.
	outbound_proxy_register	(Optional) Whether to register with a proxy server during initialization. Valid values are disable and enable. Default is enable.
	prack_mode	(Optional) Although SIP use UDP, phone can get reliable response(ACK) when this parameter is enabled. Valid values are disable and enable. Default is disable.
	user_param	(Optional) Specifies the "user=phone" parameter in the To, From, and Contact headers of REGISTER messages. Valid values are disable and enable. Default is disable.
	replaces_mode	(Optional) Specifies the SIP "Replace" header support. Valid values are disable and enable. Default is enable.
	local_udp_port	(Optional) UDP port used for SIP messages. Range is from 1024 to 32000. Default is 5060.
	timer_register_expires	(Optional) Amount of time, in seconds, after which a REGISTRATION request expires. This value is inserted into the Expire header field. Valid values are 0 to 6400. Default is 3600.
	timer_session	(Optional) Specifies the SIP session time in seconds. Valid values are 0 to 640. Default is 0.
	timer_t1	(Optional) Lowest value, in milliseconds, of the

		retransmission timer for SIP messages. Valid values are 100 to 640. Default is 250.
	timer_t2	(Optional) Highest value, in milliseconds, of the retransmission timer for SIP messages. Valid values are 641 to 6400. Default is 2000.
	centralized_conference	(Optional) Specifies use of a centralized conference server to process audio for the conference. Valid values are enable/disable Default is enable.
	conference_url	(Optional) Specifies the URI for the centralized conference server. Max 50 characters are available.
	broadsoft_blf	(Optional) Specifies use of Broadworks BLF registration or Shared Line registration for DSS Line types. Also defines URL for Broadworks BLF registration. Valid valuse are enable/disable. Default is dosable.
	max_line_num	(Optional) The number of programmable buttons used for SIP lines and features. Valid values are as follows: - LIP-6812 phone — 2 to 11 - LIP-6830 phone — 2 to 24 Default is 2.
	line1_proxy_address ~ linen_proxy_address	Address of the SIP proxy servers that are used by the phones. Enter the addresses in IP address or host name of the proxy server. The <i>n</i> variable represents a phone line. Note: The linen_proxy_address parameter and the linen_proxy_port parameter can be used to assign different proxy addresses to different phone lines. The value of "n" can be from 1 to value of max_line_num.
	line1_proxy_port ~ linen_proxy_port	Port number of the SIP proxy server that will be used by phone lines. The <i>n</i> variable represents a phone line. Valid values are 1024 to 32000. Default is 5060.
	line1_displayname ~ linen_displayname	(Optional) Identification as it should appear for caller-identification purposes. For example, instead of jdoe@company.com appearing on phones that have caller ID, you can specify User A in this parameter to have User A appear on the called party display. If a value is not specified for this parameter, nothing is used. The <i>n</i> variable represents a phone line. Max 50 characters are available.
	line1_name ~ linen_name	SIP User ID, often Number or SIP address for use when registering. Enter a number without dashes. For example, enter 555-0100 as 5550100. Enter an SIP address without the host name. The <i>n</i> variable represents a phone line. Max 50 characters are available.
	line1_authname ~ linen_authname	(Optional) Name used by the phone for authentication if a registration is challenged by the proxy server during initialization. It is required only if a proxy server requires authentication from phones. The <i>n</i> variable represents a phone line. Max 50 characters are available.
	line1_password ~	(Optional) Password used by the phone for authentication if

	linen_password	a registration is challenged by the proxy server during initialization. The <i>n</i> variable represents a phone line. Max 50 characters are available.	
	line1_type ~ linen_type	(Optional) Line type can be configured by ITSPs. Valid values are as follows: - private — A line that is only presented with any call appearance that is only visible and accessible through the original endpoints involved in setting up the call. - shared — a line that is only presented with any call appearance that is visible and optionally accessible through the original endpoints in the call as well as an authorized set of other endpoints in the network. - dss — a shared line except no outgoing call access is provided. The users can make one-touch calling to covered extensions (Direct Station Selection). The extension number is set in the linen_extension field. Default is private.	
	line1_extension ~ linen_extension	(Optional) When a line (linen_type) is assigned as a DSS, the associated extension number must be assigned. The <i>n</i> variable represents a phone line.	
ROUTE	add	Note : (Optional) Routing table can be used to manage the dial plan in the LIP Phone. As soon as a digit pattern matching the routing table entry is found, the call setup process will complete automatically. Note: 0 to 9, '*' and '#' defines the prefix digits and the number of digits required to follow each prefix '~' is a wild card character that match any multiple characters. '?' is a wild card character that match any 1 character. '.' represents "virtual dial tone" ',' locates the position of a 3-second pause in the prefix number	
		intf	Must be SIP.
		port	Must be 0.
		nums	Specifies the destination prefix number. Valid values are 0 to 9, '*', '#', '~', '?', '.' or NULL.
		trunc	(Optional) Specifies the number of prefix digits to be stripped before forwarding the collected digits to the destination. Valid values are 0 to 31.
		pre	(Optional) Specifies the number to add in front of the phone number. Valid values are 0 to 9, '*', '#', '.', '~' or NULL.
		post	(Optional) Specifies the number to add at the back of the phone number. Valid values are 0 to 9, '*', '#', '.', '~' or NULL.
		pause	(Optional) Specifies the position of prefix table which has the 3 seconds pause before sending the call. The ',' locates the position of the 3 seconds pause in the prefix number. Valid values are '?', ',' or NULL.
		ip-addr	(Optional) Specifies the ip-address of phone to assign the prefix number without regard to the proxy address..
DSP	ringer_off	(Optional) Turn on or off the ring signal when receiving inbound call. Valid values are 1 (on) and 0 (off). Default is 1 (on).	
	VAD	(Optional) Enables voice activation detection (VAD). Valid values are on and off. Default is off.	
	dtmf_payload	(Optional) Specifies the DTMF payload type for RFC2833. Valid values are 96 through 255. The default is 101.	
	dtmf_duration	(Optional) Specifies the DTMF duration	

		Valid values are 50 through 300 ms. The default is 120.
	frame_duration	(Optional) RTP frame duration in milliseconds. Valid values are 10 to 100. Default is 20.
	headset_mode	(Optional) Whether or not the headset mode is enabled. When enabled, the headset will be selected as the preferred transducer. Valid values are disable and enable. Default is disable.
	dtmf	(Optional) RFC 2833 payload type for DTMF signals. Valid values are as follows: - inband — Always generate in-band DTMF. - nego — Negotiate RFC2833 out-of-band and in-band with remote side. - rfc2833 — Always generate DTMF digits out-of-band RFC2833. - info — Always generate DTMF digits out-of-band INFO message. Default is nego.
	ringtype0	(Optional) Two value frequency array, 0 to 4000 Hz. Default is 425 440
	ringtype1	(Optional) Two value frequency array, 0 to 4000 Hz. Default is 530 555
	ringtype2	(Optional) Two value frequency array, 0 to 4000 Hz. Default is 350, 375
	ringtype3	(Optional) Two value frequency array, 0 to 4000 Hz. Default is 1280, 1300
	ringtype4	(Optional) Two value frequency array, 0 to 4000 Hz. Default is 490, 500
	ringtype5	(Optional) Two value frequency array, 0 to 4000 Hz. Default is 690, 700
	ringtype6	(Optional) Two value frequency array, 0 to 4000 Hz. Default is 1090, 1100
	cadence0	(Optional) Ring cadence when undefined in Alert Info header. Six value time array (on off on off on off). Valid range is 0 to 30000 milliseconds. Default is 2000 4000 0 0 0 0.
	cadence1	(Optional) Ring cadence when External call in Alert Info header. Six value time array (on off on off on off). Valid range is 0 to 30000 milliseconds. Default is 800 400 800 4000 0 0.
	cadence2	(Optional) Ring cadence when Group call in Alert Info header. Six value time array (on off on off on off). Valid range is 0 to 30000 milliseconds. Default is 400 200 400 200 800 4000.
	cadence3	(Optional) Ring cadence when Internal call in Alert Info header. Six value time array (on off on off on off). Valid range is 0 to 30000 milliseconds. Default is 300 200 1000 200 300 4000
	cadence4	(Optional) Ring cadence when ACD call in Alert Info header. Six value time array (on off on off on off). Valid range is 0 to 30000 milliseconds. Default is 500 0 0 0 0 0
	cadence5	(Optional) Ring cadence when ACD call in Alert Info header. Six value time array (on off on off on off). Valid range is 0 to 30000 milliseconds. Default is 1000 100 1000 2000 0 0

	jitterbuffer_min_delay	(Optional) Minimum jitter buffer delay time in milliseconds. Valid values are 0 to 150. Default is 30. Note : Jitter buffer is used to control QoS. Using larger values produce less packet loss as the LIP Phone will wait longer for receipt of packets. However, large values may delay voice packet processing. Smaller values may produce more packet loss but quicker voice packet processing.
	jitterbuffer_nom_delay	(Optional) Nominal jitter buffer delay time in milliseconds. Valid values are 0 to 150. Default is 60.
	jitterbuffer_max_delay	(Optional) Maximum jitter buffer delay time in milliseconds. Valid values are 0 to 150. Default is 120.
FWRD	condition	(Optional) Specifies the condition when the phone forwards a call. Valid values are as follows: • -1 — disabled (Disable forwarding feature) • 0 — not-usage (Don't forward a call) • 1 — no-answer (Forward a call when the call is not answered). • 2 — busy (Forward a call when the phone is busy). • 3 — no-answer & busy (Forward a call when the phone is busy or the call is not answered). • 4 — un-conditional (Always forward a call). Default is 0 (not-usage).
	forwarding_address	(Optional) Specifies the address to forward a call. Max 60 characters are available.
	noanswer_time	(Optional) Specifies the no-answer time, in seconds, for no-answer condition forward. Valid values are 1 to 30. Default is 10.
DIAL	dial_mode	(Optional) Specifies the default dial-mode. Valid values are number, ip or url. Default is number.
	pause_timer	(Optional) Specifies the pause timer in seconds. Valid values are 1 to 30. Default is 3.
	inter_digit_timer	(Optional) Specifies the inter-digit timer in seconds. Valid values are 1 to 30. Default is 6.
	dialplan	(Optional) Specifies the dial plan type. Valid values are digitmap or routing. Default is routing.
	digitmap	(Optional) Specifies the digit map string. Max 512 characters are available. Default is "x.T x+#".
	digitmap_tone	(Optional) Specifies the digit map string for second dial tone. Max 512 characters are available.
	digitmap_process	(Optional) Specifies the digit map string with truncation, prefix and post digits. • num: the digitmap string (max. 512 length string) • trunc: the number of digits to strip (max string 0 ~ 30) • prefix: the digits to add in the front of truncated number (max. 32 length string) • post: digits to add at the end of truncated number. (max. 32 length string)

PROG	add	prog	(Optional) Specifies the flexible key number. Valid values are as follows when the max line number is 2 (default value): • LIP-6812 phone — 2 to 11 • LIP-6830 phone — 2 to 24
		func	(Optional) Specifies the function to assign. Valid values are as follows: • 1 — Speed Dial • 2 — Phonebook • 3 — Call Log • 4 — Headset • 5 — Redial • 6 — Redial • 7 — Return • 8 — FWRD • 9 — CONF • 10 — TRNS • 11 — Hold • 12 — DND • 13 — Ringer Off • 14 — Message
		num	(Optional) Specifies the number to dial when the parameter func is defined as 1(Speed Dial).
CALL	caller_id_blk		(Optional) Configures caller ID blocking. When enabled, the phone blocks its own ID. Valid values are enable and disable. Default is disable.
	anonymous_call_blk		(Optional) Enables or disables blocking of anonymous incoming calls. Valid values are enable or disable. The default is disable.
	call_waiting		(Optional) Configures call waiting for incoming call. Valid values are enable and disable. Default is enable.
	call_waiting_tone		(Optional) Enables or disables call waiting tone for every call. Valid values are enable and disable. Default is enable.
	call_hold_ringback		(Optional) If you have a call on hold and are talking on another call, when you hang up the call, this parameter causes the phone to ring, letting you know that you still have another party on hold. Valid values are enable and disable. Default is enable.
	msg_waiting_tone		(Optional) Enables or disables a stutter dial tone when there is a message waiting. Valid values are enable and disable. Default is enable.
	auto_answer		(Optional) Enables or disables answering automatically an incoming call. Valid values are enable and disable. Default is enable.
	call_direct		(Optional) Enables Hotline/Warm-Line operation. Valid values are enable or disable. Default is disable.
	call_direct_number		(Optional) Destination for direct call.
	call_direct_timer		(Optional) Delay timer for Warm-Line operation. Valid values are 0 to 10 seconds delay.

		Default is 5.
SYSTEM	lang	(Optional) Specifies the language of strings displayed on the LCD. Valid values are as follows: • 0 — english • 1 — french • 2 — korean • 3 — danish But the supported languages can be limited by the LCD type of LIP Phone. Default is 0 (english).
	lock_outgoing_call	(Optional) Enables or disables locking an outgoing call. Valid values are as follows: • 0 — unlock • 1 — lock Default is 0 (unlock).
	use_speed_number	(Optional) Enables or disables using Speed Number dialing. Valid values are as follows: • 0 — disable • 1 — enable Default is 1 (enable).
	web_server	(Optional) Specifies the web server activity. Valid values are as follows: • 0 — disable • 1 — enable Default is 1 (enable).
	telnet_server	(Optional) Specifies the telnet server activity. Valid values are as follows: • 0 — disable • 1 — enable Default is 1 (enable).
	phone_password	(Optional) Specifies the LCD Menu and Phone Lock password. Valid value is 4-digits string. Default is a null string.
	function private_hold	(Optional) Specifies soft key access for Private Hold. Valid values are disable and enable. Default is disable.
	function barge-in	(Optional) Specifies soft key access for Barge-In. Valid values are disable and enable. Default is disable.
	function cdp	(Optional) Specifies cdp on reboot to define VLAN. Valid values are disable and enable. Default is enable.
	type	(Optional) Specifies the provisioning type. The LIP Phone supports two types of provisioning, TFTP and HTTPS. Valid values are as follows: • 0 — TFTP • 1 — HTTPS Default is 0 (TFTP).
	cfg_downlaod	(Optional) Whether to get a configuration file from the provisioning server. Valid values are disable and enable. Default is enable.
	sw_downlaod	(Optional) Whether to get a new firmware from the provisioning server. Valid values are disable and enable. Default is enable.
	dhcp_get_tftp	(Optional) Whether to get a TFTP server address using option 66 or 150 on DHCP. Valid values are disable and enable. Default is enable.

PROVISION	dhcp_get_http	(Optional) Whether to get a HTTP URL using option 160 on DHCP. Valid values are disable and enable. Default is enable.
	https_url	(Optional) Specifies an URL string for HTTPS provisioning server. Max 255 characters are available.
	https_opt	(Optional) Specifies a DHCP option number for HTTP/HTTPS URL. Valid values are 1 to 255. Default is 160.
	https_port	(Optional) Specifies the port of HTTPS web server. Valid values are 0 to 65535. Default is 443.
	https_id	(Optional) Specifies the ID to authenticate for HTTPS session. Max 50 characters are available.
	https_password	(Optional) Specifies the password to authenticate for HTTPS session. Max 50 characters are available.
	https_macform	(Optional) Specifies the filename of phone specific configuration file. "\$MAC" will be replaced by the MAC address. "\$MAC" must be included in the files name or path Max 50 characters are available. Default is "\$MAC".
	verifying_cert	(Optional) Specifies the hexadecimal value composed by a 3-bit field flag for HTTPS certification verification. 0x01 checks valid certification authority. 0x02 checks whether a server name is valid. 0x04 checks whether a certification is expired. Valid values are 0 to 7. Default is ff.
	decrypt_key	(Optional) 32 byte hexadecimal 3DES decryption key.
	smartup_use	(Optional) Enables or disables using Smart Update. Valid values are disable and enable. Default is enable.
	smartup_type	(Optional) Specifies the type of Smart Update. Valid values are as follows: 1 — checks new version periodically 2 — checks at the specific time per day Default is 2.
	smartup_interval	(Optional) Specifies the interval of periodical checking. Valid values are 0 to 86400 seconds. Default is 3600.
	smartup_time	(Optional) Specifies the time of the day to check new version. Valid values are 0 to 23 o'clock. Default is 00:00.
	smartup_confirm	(Optional) Enables or disables to confirm that the phone is rebooted when new version is found. Valid values are disable and enable. Default is enable.

Table D-1 Configuration Parameters

```

=====
LIP-68XX configuration information(v1.0) ;this line is required; do not remove form Config file.
; copyright LG-Nortel 2006
=====
;
; This file can be used as a global configuration file for all LIP-6800 series phones (LIP-6804,
LIP-6812& LIP_6830) and as a phone-specific configuration file. The Global file defines
characteristics common to all the phones using the sysconf_68??d_sip.cfg file name (??= 04, 12,
or 30). Phone-specific parameters are defined in the MAC file; use the phone's MAC address as
the file name with no extension.
;
;-----Description for configuration file-----
;
; The configuration file uses the following format
;
; [SECTION NAME]
; Field name    value
;
; Make sure there is a space character after the value and before the ";" comments.
; To enter a space character, wrap the entire string in double quotes (").
; The Configuration file returns the LIP Phone to default when the field is left blank. If the
default is desired, it is recommended no value be assigned for the field in the Config file.
; A Field may be deleted or commented-out from the Config file to use the LIP Phones existing
memory.
;
; ----- SETTINGS -----
; Assure the field/parameter settings are configured to match up with the use of the phone.
;
; The below file is set-up for the 2 lines, which is default, add lines for the specific
configuration.
;-----
;
[LAN]
;Lan configuration
;
network_mode
dns1_address
dns2_address
domain_name
tftp_server_address
tos
pc_802_priority
phone_802_priority
pc_vlan_id
phone_vlan_id
;
[VOIP]
;VoIP configurations
outbound_proxy_server
outbound_proxy_port
backup_proxy_server
backup_proxy_port
SIP_service_domain
preferred_codec
rtp_port
outbound_proxy_register
prack_mode
user_param
replaces_mode
local_udp_port
message_url
timer_register_expires
timer_session
timer_t1
timer_t2
stun_server
centralized_conference
conference_url
max_line_num
;
line1_proxy_address
line1_proxy_port
line1_displayname
line1_name
line1_authname
line1_password

```

```

line1_type
line1_extension
;
linen_proxy_address
linen_proxy_port
linen_displayname
linen_name
linen_authname
linen_password
linen_type
linen_extension
;Note 'n' is the line number assigned consecutively to the "max_line_num".
;!!! Repeat above parameters for each line on the phone up to the "max_line_num" !!!!!!!
;
;
[ROUTE]
;Call Routing Table Configurations
;add intf <port> nums [trunc pre post pause ip-addr]
;add sip 0 0 null null null 0.0.0.0
;
;
[DSP]
;DSP configurations
ringer_off
VAD
dtmf_payload
dtmf_duration
frame_duration
headset_mode
dtmf
ringtype0
ringtype1
ringtype2
ringtype3
ringtype4
ringtype5
ringtype6
cadence0
cadence1
cadence2
cadence3
cadence4
cadence5
jitterbuffer_min_delay
jitterbuffer_nom_delay
jitterbuffer_max_delay
;
[FWRD]
;Forwarding Configurations
condition
forwarding_address
noanswer_time
;
;
[DIAL]
;Dial Configurations
dial_mode
pause_timer
inter_digit_timer
dialplan
digitmap
digitmap_tone
digitmap_process
;
[PROG]
;add prog func [num] ;Entries for programmable buttons. Type the word "add" followed by
;space, the button number, space, function number and for speed dials the number to dial. For
;message function enter the url, ip address or telephone number for voice mail.
;
; prog = programmable button number, 6804N:3~4, 6812D:3~11, 6830D:3~24
; func = 0 for no function
; 1 for Speed Dial
; 2 for Phone Book
; 3 for Call Log
; 4 for Mute
; 5 for Headset
; 6 for Redial
; 7 for Return

```

```

;      8 for FWRD
;      9 for CONF
;     10 for TRNS
;     11 for Hold
;     12 for DND
;     13 Ringer Off
;     14 Message
; [num] =          ;Speed Dial phone number or Vmail contact, max.50 character string.
;
;
[CALL]
;Call Preference Configurations
caller_id_blk
anonymous_call_blk
call_waiting
call_waiting_tone
call_hold_ringback
msg_waiting_tone
auto_answer
call_direct
call_direct_number
call_direct_timer
;
;
[SNMP]
;SNMP configurations
snmp_function
snmp_manager_address
snmp_read_community
snmp_write_community
;
;
[SYSTEM]
;System configurations
lang
lock_outgoing_call
use_speed_number
web_server
telnet_server
function private_hold
function barge-in
function cdp
phone_password
;
[PROVISION]
;provisioning selections
type
dhcp_get_tftp
https_url
https_opt
dhcp_get_http
https_port
https_id
https_password
https_macform
verifying_cert
smartup_use
smartup_type
smartup_interval
smartup_time
smartup_confirm
decrypt_key
cfg_download
sw_download
;
[NETTIME]
;SNTP, Timezone and DST Configurations
sntp_server_address
interval
timezone
;      60:(GMT-12:00) INT.DATE LINE, WEST | 30:(GMT+01:00) OSLO, NORWAY
;      61:(GMT-11:00) MIDWAY/SAMOA         | 31:(GMT+01:00) PARIS, FRANCE
;      1:(GMT-10:00) HAWAII                 | 32:(GMT+01:00) ROME, ITALY
;      62:(GMT-09:00) ALASKA                 | 33:(GMT+01:00) STOCKHOLM, SWEDEN
;      2:(GMT-08:00) LA/CA, USA              | 34:(GMT+01:00) VIENNA, AUSTRIA
;      3:(GMT-08:00) PACIFIC STANDARD        | 35:(GMT+02:00) ATHENS, GREECE
;      4:(GMT-07:00) MOUNTAIN STANDARD      | 36:(GMT+02:00) HARARE, ZIMBABWE
;      5:(GMT-06:00) CENTRAL STANDARD        | 37:(GMT+02:00) HELSINKI, FINLAND

```

```

;          6:(GMT-06:00) MEXICO CITY, MEXICO | 38:(GMT+02:00) ISTANBUL, TURKEY
;          7:(GMT-06:00) SASKATC. CANADA | 39:(GMT+02:00) JERUSALEM, ISRAEL
;          8:(GMT-05:00) BOGOTA, COLOMBIA | 40:(GMT+03:00) KUWAIT
;          9:(GMT-05:00) EASTERN STANDARD | 41:(GMT+03:00) MOSCOW, RUSSIA
;         10:(GMT-05:00) LIMA, PERU | 42:(GMT+03:00) NAIROBI, KENYA
;         11:(GMT-05:00) NEWYORK, USA | 43:(GMT+03:00) RIYARD, SAUDI.
;         12:(GMT-04:00) ATLANTIC STANDARD | 44:(GMT+03:30) TEHRAN, IRAN
;         13:(GMT-04:00) CARACAS, VENEZUELA | 45:(GMT+04:00) ABU DHABI, UAE
;         14:(GMT-04:00) LA PAZ, BOLIVIA | 46:(GMT+04:00) TBLISI, GEORGIA
;         15:(GMT-03:30) NEWFOUNDLAND | 47:(GMT+04:30) KABUL, AFGHANISTAN
;         16:(GMT-03:00) BRASILIA, BRAZIL | 64:(GMT+05:00) ISLAMABAD, PAKISTAN
;         17:(GMT-03:00) BUENOS AIRES, ARGENTINA | 48:(GMT+05:30) NEW DELHI, INDIA
;         18:(GMT-03:00) GEORGETOWN, GUYANA | 65:(GMT+06:00) DHAKA, BANGLADESH
;         63:(GMT-02:00) NUUK, GREENLAND | 66:(GMT+06:30) YANGON, MYANMAR
;         19:(GMT-01:00) AZORES, PORTUGAL | 49:(GMT+07:00) BANKOK, THAILAND
;         20:(GMT-01:00) CAPE VERDE | 50:(GMT+07:00) JAKARTA, INDONESIA
;         21:(GMT) CASABLANCA, MOROCCO | 51:(GMT+08:00) BEIJING, CHINA
;         22:(GMT) LISBON, PORTUGAL | 52:(GMT+09:00) SEOUL, KOREA
;         23:(GMT) LONDON, ENGLAND | 53:(GMT+09:00) TOKYO, JAPAN
;         24:(GMT+01:00) AMSTERDAM, NETHERLANDS | 54:(GMT+09:30) DARWIN, AUS.
;         25:(GMT+01:00) BERLIN, GERMANY | 55:(GMT+10:00) GUAM STANDARD
;         26:(GMT+01:00) BERN, SWITZERLAND | 67:(GMT+11:00) SOLOMON ISLANDS
;         27:(GMT+01:00) BRUSSEL, BELGIUM | 56:(GMT+12:00) MARSHALL ISLANDS
;         28:(GMT+01:00) CENTRAL EUROPEAN | 57:(GMT+12:00) WELLINGTON, NEW ZEALAND
;         59:(GMT+01:00) COPENHAGEN, DENMARK | 58:(GMT+13:00) NUKU'ALOFA
;         29:(GMT+01:00) MADRID, SPAIN
;
dst_auto_adjust
dst_start_month
dst_start_day
dst_start_day_of_week
dst_start_week_of_month
dst_start_time
dst_stop_month
dst_stop_day
dst_stop_day_of_week
dst_stop_week_of_month
dst_stop_time
time_format
date_format
;
=====

```

Figure D-1 LIP-6812/LIP-6830 Example Configuration File

Country	No	Country	No
GMT-12:00 Int.Date Line, West	60	GMT+01:00 Oslo, Norway	30
GMT-11:00 Midway/Samoa	61	GMT+01:00 Paris, France	31
GMT-10:00 Hawaii	1	GMT+01:00 Rome, Italy	32
GMT-09:00 Alaska	62	GMT+01:00 Stocholm, Sweden	33
GMT-08:00 Los Angeles, Califonnia	2	GMT+01:00 Vienna, Austria	34
GMT-08:00 Pacific Standard	3	GMT+02:00 Athens, Greece	35
GMT-07:00 Mountain Standard	4	GMT+02:00 Harare, Zimbabwe	36
GMT-06:00 Central Standard	5	GMT+02:00 Helsinki, Finland	37
GMT-06:00 Mexico City, Mexico	6	GMT+02:00 Istanbul, Turkey	38
GMT-06:00 Saskatc., Canada	7	GMT+02:00 Jerusalem, Israel	39
GMT-05:00 Bogota, Colombia	8	GMT+03:00 Kuwait	40
GMT-05:00 Eastern Standard	9	GMT+03:00 Moscow, Russia	41
GMT-05:00 Lima, Peru	10	GMT+03:00 Nairobi, Kenya	42
GMT-05:00 New York, NY	11	GMT+03:00 Riyad, Saudi Arabia	43
GMT-04:00 Atlantic Standard	12	GMT+03:30 Tehran, Iran	44
GMT-04:00 Caracas, Venezuela	13	GMT+04:00 Abu Dhabi, UAE	45
GMT-04:00 La Paz, Bolivia	14	GMT+04:00 Tblisi, Georgia	46
GMT-03:30 New Foundland	15	GMT+04:30 Kabul, Afghanistan	47
GMT-03:00 Brasilia, Brazil	16	GMT+05:00 Islamabad, Pakistan	64
GMT-03:00 Buenos Aires, Argentina	17	GMT+05:30 New Delhi, India	48
GMT-03:00 Georgetown, Guyana	18	GMT+06:00 Dhaka, Bangladesh	65
GMT-02:00 Nuuk, Greenland	63	GMT+06:30 Yangon, Myanmar	66
GMT-01:00 Azores, Portugal	19	GMT+07:00 Bangkok, Thailand	49
GMT-01:00 Cape Verde	20	GMT+07:00 Jakarta, Indonesia	50
GMT 00:00 Casablanca, Morocco	21	GMT+08:00 Beijing, China	51
GMT 00:00 Lisbon, Portugal	22	GMT+09:00 Seoul, Korea	52
GMT 00:00 London, England	23	GMT+09:00 Tokyo, Japan	53
GMT+01:00 Amsterdam, Nertherlands	24	GMT+09:30 Darwin, Australia	54
GMT+01:00 Berlin, Germany	25	GMT+10:00 Guam Standard	55
GMT+01:00 Bern, Switzerland	26	GMT+11:00 Solomon Islands	67
GMT+01:00 Brussels, Belgium	27	GMT+12:00 Marshall Islands	56
GMT+01:00 Central Europeon	28	GMT+12:00 Auckland, Wellington	57
GMT+01:00 Copenhagen, Denmark	59	GMT+13:00 Nuku'Alofa	58
GMT+01:00 Madrid, Spain	29		

Table D-2 Time Zones Chart

Appendix E. Dial Pad Mode

The LIP 6812 and LIP-6830 Dial pad can be used to input digits dialed or alphanumeric characters to enter a hostname. Table E provides the input information for Dial pad mode.

Digit	Dial Pad Mode		
	Upper Case ‘[A]’	Lower Case ‘[a]’	Symbols ‘[S]’
1	@ : /	@ : /	@ : /
2	A B C	a b c	\$ %
3	D E F	d e f	^ & _
4	G H I	g h i	() ?
5	J K L	j k l	- + , /
6	M N O	m n o	< > =
7	P Q R S	p q r s	; :
8	T U V	t u v	, " `
9	W X Y Z	w x y z	{ }
0	. , ? !	. , ? !	. , ? !
*	. *	. *	. *
#	Space (')	Space (')	# []

Table E. Alphanumeric Character Set

Appendix F. Auto Provisioning Routine

General

The LIP-6800 series terminals incorporate software routines to automatically provision the configuration and software of the phone. The basic routine employs CDP, if enabled, to initialize LAN settings, DHCP to gather basic network and provisioning server information, downloads configuration and software data from the provisioning server and registers and authenticates with the SIP server using the configuration data. The files with the configuration data can be encrypted so as to protect sensitive configuration customer data.

The phone attempts contact with and downloads configuration files and checks for software updates. For more details on the Configuration files see Appendix D. Note downloads can be disabled separately for the configuration files and software. As a default, the phone will employ TFTP as the download protocol. Optionally, the phone can employ HTTP/HTTPS as the provisioning protocol. If configured for HTTP/S or, if the DHCP server returns a URL for the assigned HTTP/S Option, default Opt. #160, the LIP Phone will use employ HTTP/HTTPS and the URL provided to access the configuration server.

DHCP

During the initial and subsequent boot-up cycles, the phone will request various data options from the DHCP server. The following lists the DHCP options requested.

- DHCP Option #1 Subnet Mask
- DHCP Option #2 Time offset in seconds of the local time zone from GMT.
- DHCP Option #3 Default Gateway (router) IP Address
- DHCP Option #6 DNS Server IP Address
- DHCP Option #42 SNTP Server IP Address
- DHCP Option #50 IP address of the phone
- DHCP Option #66 TFTP Server Name
- DHCP Option #150 TFTP Server IP Address, has priority over Option 66 when set.
- DHCP Option #160 default HTTP/HTTPS URL for provisioning

TFTP Downloads

When TFTP is employed, the LIP Phone will contact the server provided from the DHCP server using the name or IP address from DHCP Option #66 or #150 or the TFTP server in memory when Option 66/150 is disabled or not provided by DHCP. The LIP Phone will request the TFTP server send the Global Configuration file ("sysconf_6812d_sip.cfg" for the LIP-6812 or "sysconf_6830d_sip.cfg" for the LIP-6830). If the file is provided as an unencrypted file, configuration data is transferred to the phone memory. If the file is not readable, the phone will attempt to decrypt the file using the decryption key in memory ("decrypt_key").

Changes in the Provisioning data from Global Configuration file are transferred to the phone memory and the download the process is repeated for the Phone Specific Configuration file. Configuration data in the Phone Specific file will overwrite data from the Global file.

NOTE: If a value is changed for a Field Name marked with an asterik in Table D-1, the reboot flag will be enabled and the LIP Phone will reboot after download cycle is completed. By default, the Phone Specific file uses the MAC address of the Phone as the file name with no file extension.

After completing download of the Configuration files, the LIP Phone will request the software version file from the Server. This file named, "LIP_6812_VER_SIP2" or "LIP_6830_VER_SIP2" based on the Phone model, is an ASCII text file that identifies the software version available on the Server as well as the names of the files to be downloaded. The Phone compares the software version identified in the file with the version in the Phone. If different, the files identified in the version file are downloaded; typically the files required for download include the main firmware file and an xml file but, may include other files as needed for the upgrade. These files along with the version file are available from LG-Nortel. If desired, comments may be added to the version file using "#" as the leading character of the comment line.

If software download is required, after completion the LIP phone will enable the reboot flag and after completing the download cycle, the LIP Phone will reboot.

HTTP/HTTPS downloads

When HTTP/HTTPS is employed, the LIP Phone will contact the URL defined in the Configuration memory or in the assigned HTTPS DHCP Option, default #160 when available and enabled. When the DHCP Option is populated, the Phone will employ to HTTP/HTTPS instead of the default TFTP mode. If the server uses HTTPS, the Phone will establish an open SSL link. During the SSL handshake, the Phone may optionally verify that the HTTPS Certification is valid. The LIP Phone will verify the Certification is from a valid authority such as Verisign, the server name is correct and the certificate has not expired. Each of these three verifications is enabled by default in the Phone Configuration memory but can be disabled using the Configuration file or through the Phone Web Admin. The LIP Phone supports several standard CAs including Verisign. In addition, a CA may be copy to the phone using the Web Admin.

If the HTTP/HTTPS Server requires authentication, the Phone uses the HTTPS ID and Password assigned in the Configuration memory; the Phone supports the basic and digest method. At this point, the phone will follow the same routine as for TFTP. The LIP Phone will request the Global configuration file ("sysconf_6812d_sip.cfg" for the LIP-6812 or "sysconf_6830d_sip.cfg" for the LIP-6830). If the file is provided as an unencrypted file, configuration data is transferred to the phone memory. If the file is not readable, the Phone will attempt to decrypt the file using the decryption key in memory ("decrypt_key").

Changes in the Provisioning data from Global Configuration file are transferred to the phone memory and the download process is repeated for the Phone Specific Configuration file. Configuration data in the Phone Specific file will overwrite data from the Global file.

With the Global Configuration file downloaded, the Phone will repeat the process for the Phone Specific Configuration file. Configuration data in the Phone Specific file will overwrite data from the Global file.

NOTE: If a value is changed for a Field Name marked with an asterik in Table D-1, the reboot flag will be enabled and the LIP Phone will reboot after the download cycle is completed. By default, the Phone Specific file uses the MAC address of the Phone as the file name with no file extension. For HTTP/S, a different file name can be assigned in the Phone to use as Phone Specific Configuration file name.

After completing download of the Configuration files, the LIP Phone will request the software version file from the server. This file named "LIP_6812_VER_SIP2" or "LIP_6830_VER_SIP2" based on the Phone model, is an ASCII text file that identifies the software version available on the server as well as the names of the files to be downloaded. The Phone will first request the file "*mac address*/LIP_68xx_VER_SIP2, if not found, the file LIP_68xx_VER_SIP2 is requested. The Phone compares the software version identified in the file with the version in the phone. If different, the files identified in the version file are downloaded; typically the files required for download include the main firmware file and an xml file but, may include other files as needed for the upgrade. These files along with the version file are available from LG-Nortel. If desired, comments may be added to the version file using "#" as the leading character of the comment line. If desired, comments may be added to the version file using "#" as the leading character of the comment line.

If the software download is required, after completion of the download cycle the LIP phone will reboot.

SIP Server Check-in Request

Upon receipt of a SIP check-in request from the SIP server, the LIP Phone will check-in with the appropriate provisioning server, initiating the provisioning process. The phone must be idle to initiate provisioning, if busy, upon return to idle, the process will start. During the process, the LIP Phone will download any configuration file changes as well as new software regardless of the settings for the software and configuration download flags. If any of the Configuration parameters shown with an asterik in Table D-1 or if new software is download, the phone will reboot.

